VOLUME XXXIX NUMBER FIVE

THE NATIONAL GEOGRAPHIC MAGAZINE

MAY, 1921

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(Size, 28 x 36 inches)

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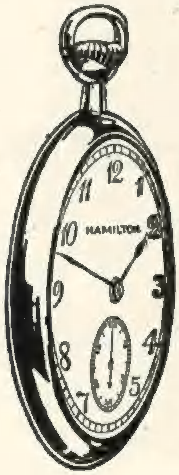

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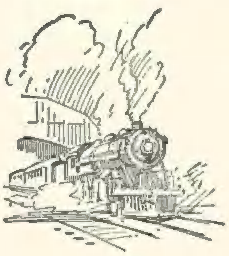

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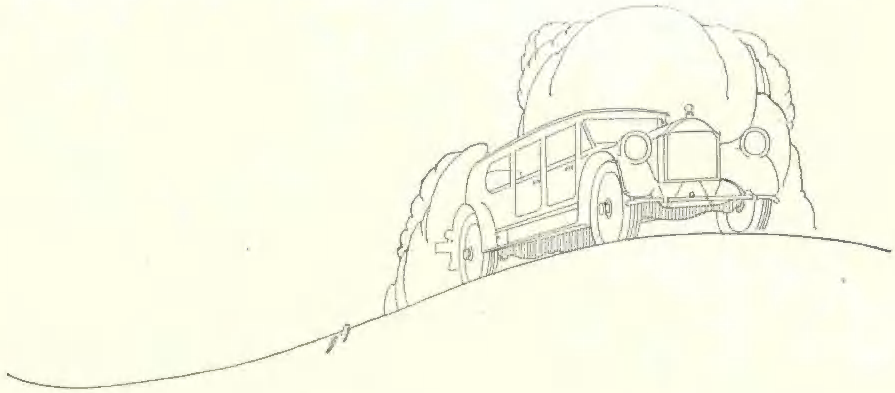

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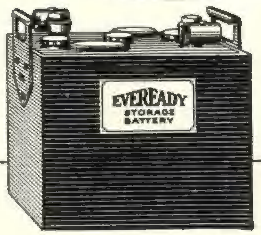

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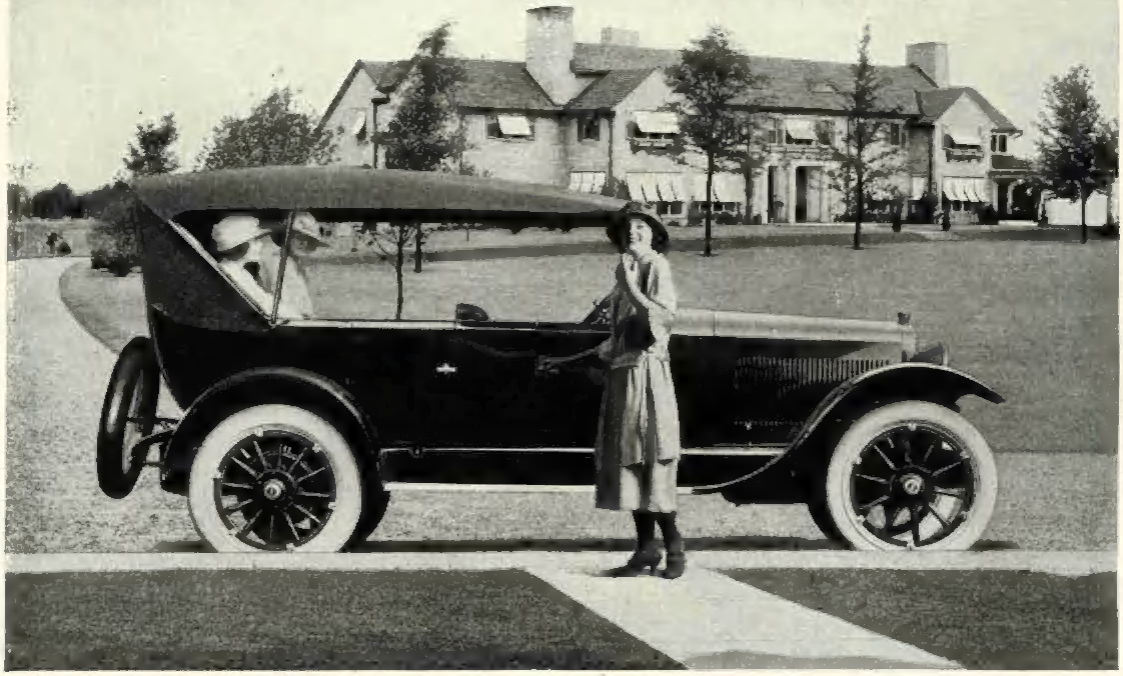

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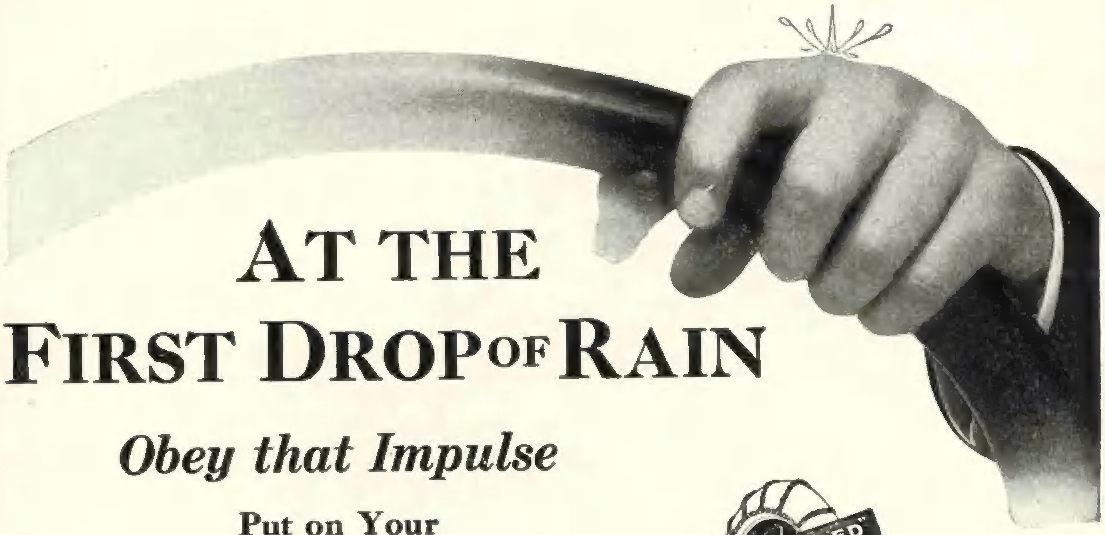

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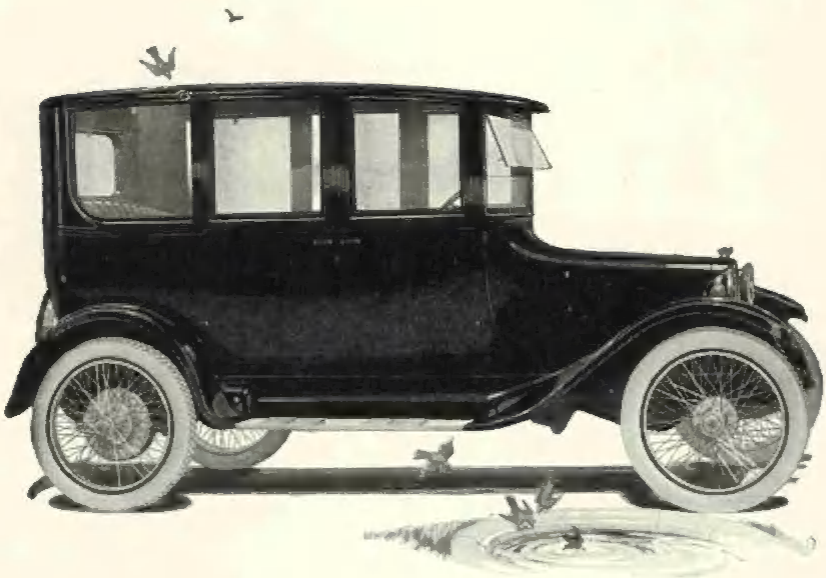

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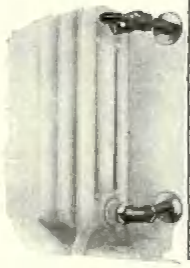

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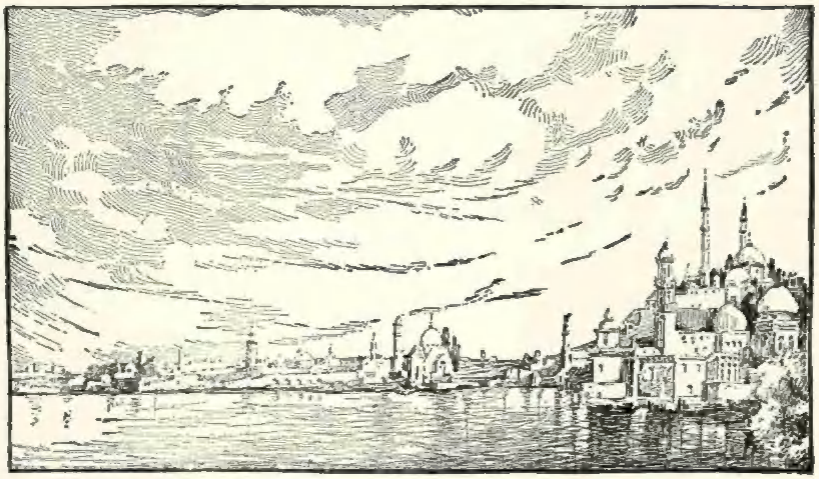

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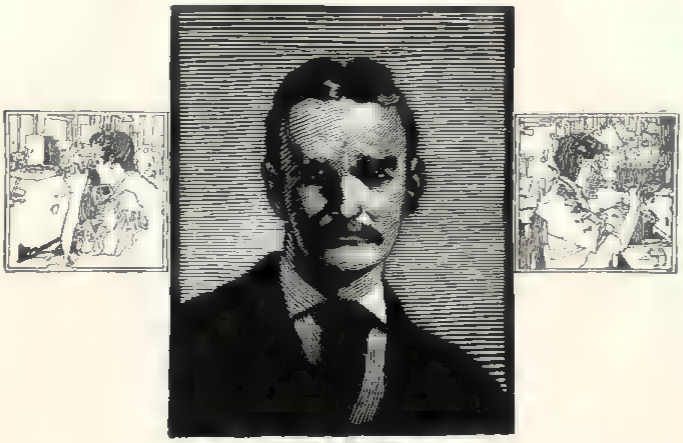

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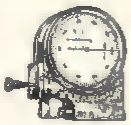

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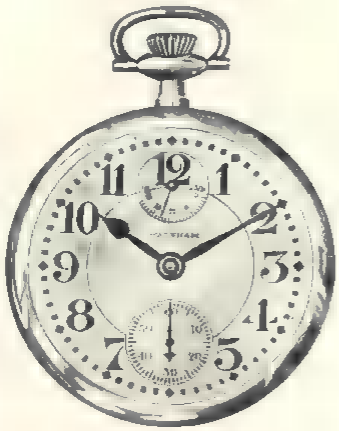

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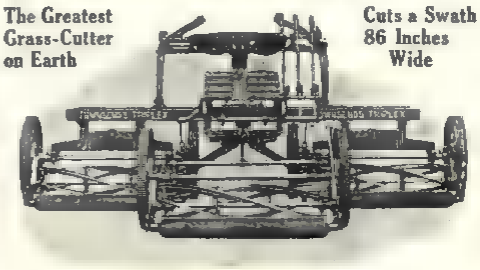

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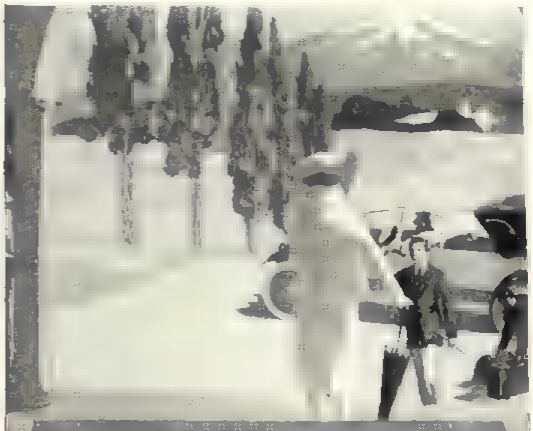

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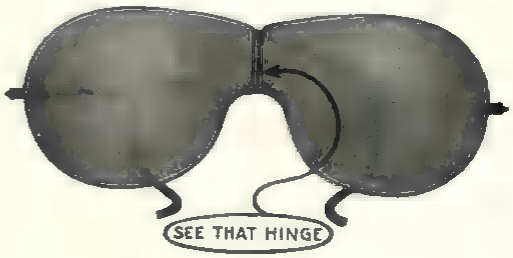

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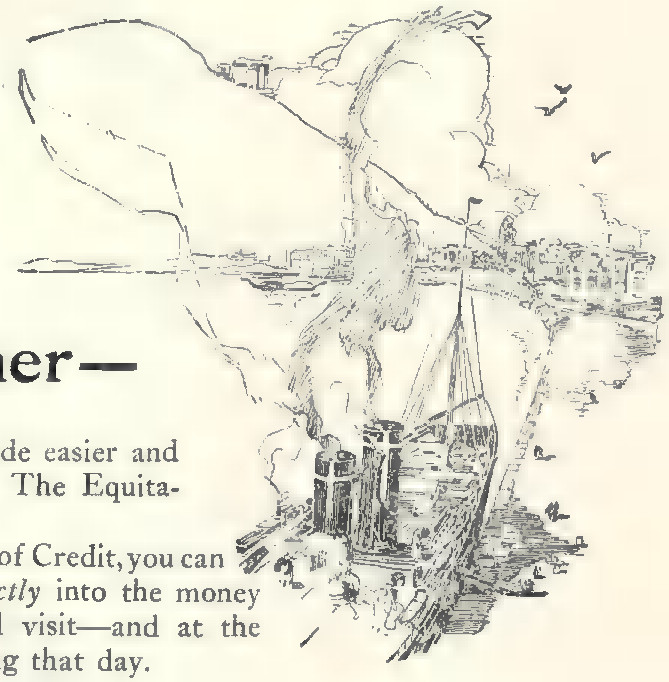

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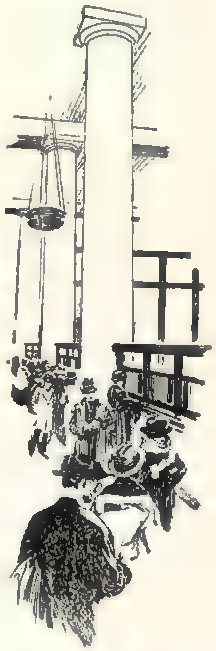

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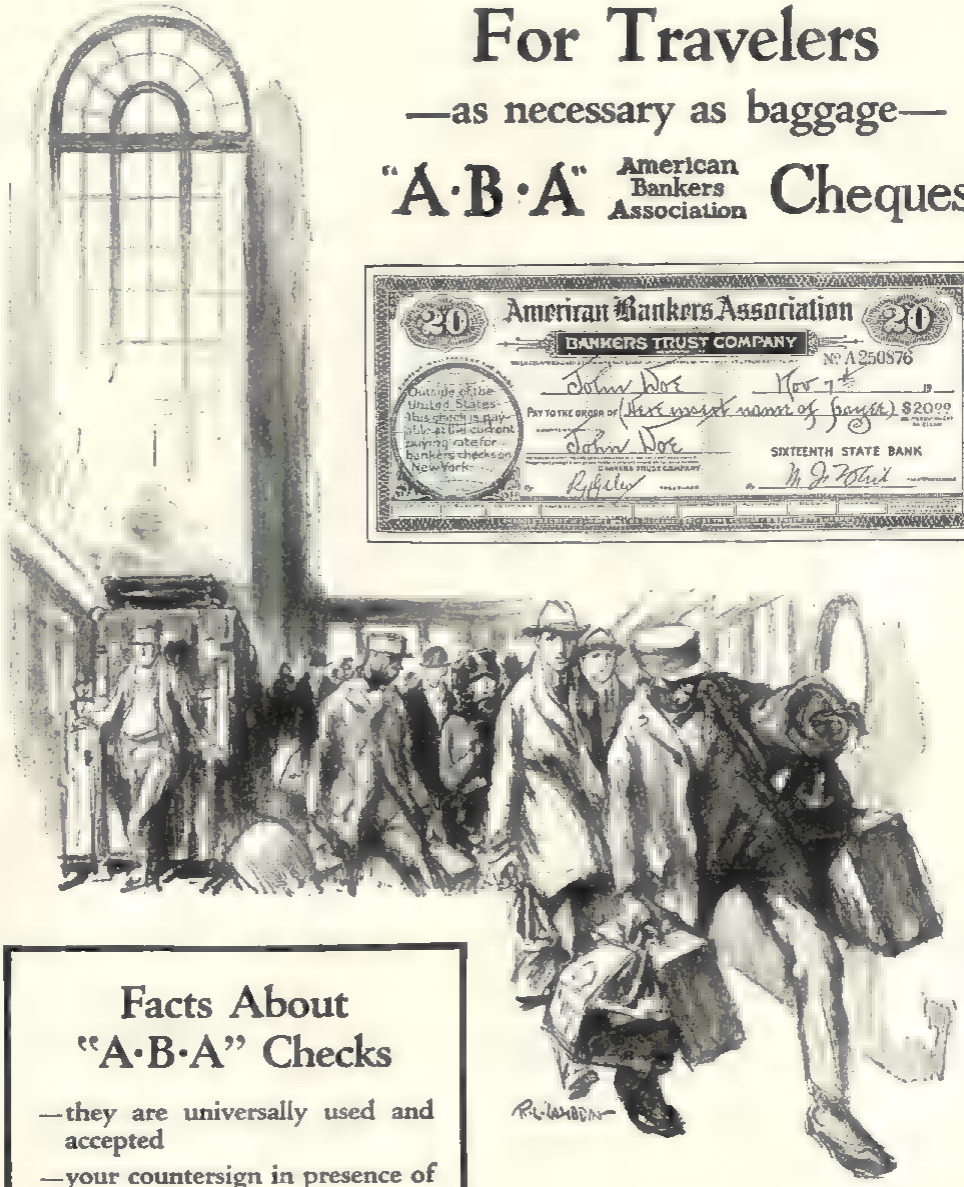

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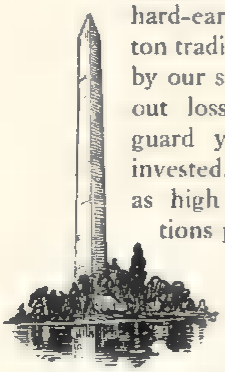

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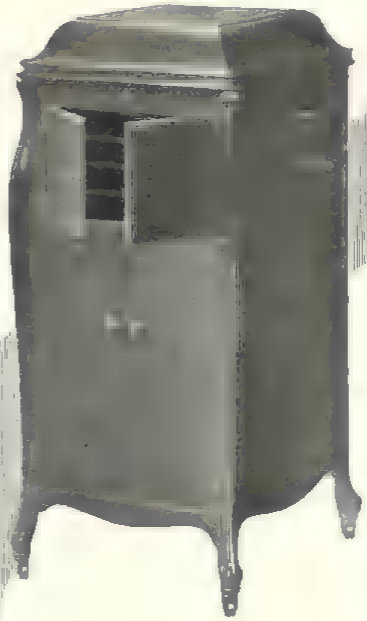

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VOL. XXXIX, No. 5 WASHINGTON MAY, 1921

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WESTERN SIBERIA AND THE ALTAI MOUNTAINS

With Some Speculations on the Future of Siberia

By Viscount James Bryce

Author of "Impressions of Palestine," "The Nation's Capital," and "Two Possible Solutions for the Eastern Problem," in the National Geographic Magazine

SINCE JULY, 1914, no American, Englishman, or Frenchman, except those officers who were sent out on military missions, has had a chance of traveling along the great Transcontinental Railway which connects western Europe with China and Japan; so before I come to speak of the Altai Mountains, it is worth while to say something of this wonderful highway of commerce, along which I passed in 1913, on my return to England from Japan.

From Calais, on that arm of the Atlantic which we call the English Channel, to Vladivostok, on that arm of the Pacific we call the Sea of Japan, it is more than 7,000 miles, while from New York to San Francisco it is only about 3,000 miles.

An interesting comparison may be made between these two transcontinental roads, on opposite sides of the world, linking the Atlantic with the Pacific.

Each when it leaves the Atlantic coast runs for more than 1,500 miles through civilized and thickly peopled regions, mostly agricultural, though studded with cities. Each when it approaches the center of the continent climbs a mountain range and passes over vast tracts of wild and thinly inhabited country, sometimes through deserts, sometimes through forests. Each crosses great rivers; each coasts along the shore of a large and beautiful inland sea. Each emerges finally from the solitudes of its middle course into a rich and prosperous land and finds its end at a famous harbor—the American Transcontinental at San Francisco, the Asiatic Transcontinental at the equally spacious and well sheltered, if less beautiful, port of Vladivostok.

Along both roads there is a great variety of scenery, much of it striking, but the Asiatic line has an interest that is all its own in the variety of the peoples also through which it passes. One language only rules from the Hudson to the Golden Gate, whereas between Calais and Vladivostok many tongues are spoken and many races of men—Hollanders and Germans, Poles and Lithuanians and Russians, Bashkirs and Buriats, Manchus and Chinese—have their homes.

FROM CALAIS TO MOSCOW

The best way to enjoy the Asiatic Transcontinental journey is to begin at the west end and travel east, whereas the American Transcontinental should be taken from the east toward the west, and for the same reason, viz., that it is more interesting to start from civilization and pass by degrees into wilder regions, more solitary and more picturesque, which keep curiosity constantly alive, than it is to reverse the process.

So, although it was my own fortune to have to travel from the east to the west, I will venture to conduct the reader the

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KIRGHIZ CHILDREN AT PLAY

There are more than three million members of the Kirghiz family—a Mongolian people inhabiting an area of nearly 3,000,000 square miles, extending from northwest China to the lower Volga River. There are two main branches of the family—Kara, or Black Kirghiz, so called from the color of their tents, and the Kazaks, or riders, from which term the word Cossack is derived.

Photograph courtesy Department of Commerce

A GROUP OF SIBERIAN CHILDREN IN FRONT OF A COÖPERATIVE STORE ESTABLISHED BY THE SIBERIAN GOVERNMENT FOR THE DISTRIBUTION OF PROVISIONS TO THE NEEDY

other way, *i. e.*, from western Europe to far eastern Asia. (See the National Geographic Society's Map of Asia, issued as a supplement with this number of THE GEOGRAPHIC.)

Of the comparatively familiar 1,600 miles or thereabouts from Calais to Moscow, nothing need be said, except that so far as the aspects of nature are concerned they are comparatively monotonous, for the surface is an almost unbroken level, only one group of low mountains in Westphalia rising out of the sandy plains of western and central Germany.

From Moscow onward the land, though generally flat, has its undulations; but to the eye of a naturalist it continues to be somewhat uniform, for there are very few deep railway cuttings to indicate the rocks that lie beneath the surface, and as the country traversed is nearly all either cultivated or forest-clad, few wild plants are seen, and these, the latitude being the same, are of the usual Central European types.

The first striking view is reached at the town of Samara, where the broad Volga, greatest of European rivers, is crossed by a long and lofty bridge, more than five hundred miles above the point where it enters the Caspian Sea. Here for the first time one feels a change in the air, for here begins the dryness of the Asiatic steppes.

CONSUMPTIVES CAME TO DRINK MARES' MILK

Thirty-seven years ago, when I sailed down the Volga, the railway ended at this point. Thither, in that day, consumptive patients used to come from northern and middle Russia to drink mares' milk and gain strength in the invigorating breezes that came from the southeast over arid plains. It was then the summer sanatorium of Russia, as the south coast of Crimea was the winter resort of those rich enough to travel so far.

A hundred miles beyond the Volga blue heights appear on the eastern horizon, and we quickly enter the foothills of the Ural range, their gently rounded slopes descending into charming valleys, pasture alternating with open woods which

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SETTLERS FROM EUROPEAN RUSSIA ARRIVING AT A RAILWAY STATION IN SIBERIA

The conquest of Siberia by Russia began in the reign of Ivan the Terrible, who gave to two merchants the right to build forts on the rivers Tobol and Irtish. These merchants, Jacob and Gregory Stroganov, hired 800 Cossacks, under the leadership of the Volga River pirate, Yermak, to protect their recently acquired territory. This band penetrated far into the interior and in 1581 captured Sibir, capital of the Siberian Tatar Empire.

distantly suggest those of the "Parks" of Colorado—woods not thick, because the climate is dry, but scattered in picturesque clumps over hill and dale.

As the line pierces deeper into the mountains, the glens are narrower and are filled with a denser forest, out of which bare summits rise to heights of three or four thousand feet. It is a lonely land, with few and small villages, but it is rich in gold and silver, copper, coal, and platinum—from here comes nearly all of the world-supply of that metal—with an extraordinary variety of rare and valuable stones.

The train takes about seven hours to traverse this picturesque region, stopping here and there at a busy mining town, and passing an obelisk which, at the summit level, marks the frontier of Europe and Asia. Thereafter it emerges suddenly (for the Asiatic slope is shorter

and steeper than the European) on the boundless plains of Siberia, here bare and almost waterless as are those of Arizona, but drearier, for there are here no rocks or hollows to diversify the surface, no glimpses of distant peaks to break the level line of the horizon. It is the dullest part of the whole journey from ocean to ocean.

IRTISH, THE WESTERNMOST OF SIBERIA'S FOUR GREAT RIVERS

But presently one comes, at the thriving town of Omsk, which was in 1918 the headquarters of Admiral Kolchak in his campaign against the Bolsheviks, to the first of the four great Siberian rivers, the Irtish, which, having risen far away to the south in the hills of western Mongolia, is here on its northern path to join the Obi and send its waters into the Arctic Sea.

To the Obi itself, an even fuller stream, we come in eight hours more, and see a flotilla of steamers moored to its bank. But of it more anon, for up it one voyages to the Altai. From this point onward the country is rougher and thinly inhabited, for much of the land is the sort of forest swamp which the people call *Taiga*.

On each side of the railway track the woods have been cut back to leave an open space of fifty to one hundred yards wide, so that sparks or coals from the locomotive will not start a conflagration. This open, wide grassy belt is in summer covered with a luxuriant growth of tall flowers on each side of the line, giving the effect of what gardeners call a "herbaceous border," with the railroad track for the gravel walk between the two flower beds.

Behind stand the pines, with their tall, straight, reddish trunks, contorted boughs, and dark-green foliage, beautiful as are those of the Scottish Highlands.

THE YENISEI, GRANDEST OF SIBERIAN RIVERS

After many hours' journey through this delightful parterre, the traveler sees beneath him in a valley, three hundred feet deep, the grandest of all the Siberian rivers, the Yenisei, with the city of Krasnoyarsk lying on the slope between the station and the stream.

This is the finest view of a river from a railroad I can remember to have seen anywhere. The Mississippi at St. Louis and the St. Lawrence at Montreal are as wide, and may have as great a volume; but their banks are comparatively low. Here the *coup d'œil* of the bold heights and the mighty stream filling the long hollow that winds away to the north between rocks and thick woods, is magnificent.

The stream is seen to advantage from both sides, for the track stoops down more than a hundred feet to cross the valley by a lofty bridge, and rises again as much on the eastern slope, making a wide semicircle.

Thirty hours more bring us to the fourth river at Irkutsk, that capital of eastern Siberia for which the contending Bolshevik and anti-Bolshevik armies fought so long in 1917 and 1918. It is the Angara, bearing down a tremendous torrent of clear green water from Lake Baikal, which the train reaches before long.

BAIKAL, ONE OF THE WORLD'S GREAT INLAND SEAS

Lake Baikal is one of the great inland seas of the world, nearly as long as Lake Superior, though not so wide, for in clear weather the eye can reach from the one shore to the other. It fills a bow-shaped depression four hundred miles long, between high mountains dipping steeply into its waters; and on its coasts there are only wood-cutters and fishermen, with a few hunters.

Till long past the middle of last century, some while before the Transcontinental railroad was built, there was no way from the west into the lands of the Amur River and Manchuria except by a ferry across the lake of some twenty or more miles in the summer, or by sledging over its icy floor in winter, and the travelers of those days loved to describe the midnight drive under a brilliant moon.

Now the line runs for many miles along its southern shore on a shelf cut out of the steep mountain side, high above the waves, with frequent tunnels through projecting cliffs.

It was supposed, when fighting began there in and after 1917, that any retreat-

Photograph by C. S. Stilwell

A SIBERIAN PEASANT

His is a land forty times as large as Great Britain and Ireland, but with only one-fifth the population.

ing force would be likely to cover its rear by destroying the track in some part of the shelf, behind or above which no passage could be found. I have not, however, been able to learn whether this has happened.

The line runs high along the curving shores for forty or fifty miles, affording a succession of splendid prospects. Beneath are woods, mostly of birch and aspen, richly yellow in autumn, and wherever they have been cleared the space is filled by a profuse growth of the tall willow herb (*Epilobium angustifolium*), called in North America the fireweed, whose deep pink blossoms make a waving sea of color, stretching mile after mile till all tints melt into the blue of distance.

Solemn and lonely in its mountain setting, the Baikal yields in grandeur to only one other fresh-water sea, Lake Titicaca, on the plateau of Bolivia, above which tower the peaks of the Cordillera Real, the finest line of snows in all the ranges of the Andes.

WHERE THE TRANS-SIBERIAN DIVIDES

Presently the railway, leaving the lake, turns south up the valley of the Selenga River, and thence climbs the slopes, and threads for many miles the ravines of the great mass of rugged and almost uninhabited highlands which figure on our maps as the Yablonoi Mountains. Beyond these come wide plains, and beyond these plains another mountain range, till at Harbin the line divides, one branch turning southwest to Peking, the other southeast to Vladivostok.

Henceforward there are no more Russians to be seen, nor the Buddhist or spirit-worshiping tribes over whom Russia rules, for we are now in Manchuria, where the population is mainly Chinese.

From overcrowded China the industrious Celestials, no longer wearing pig-tails (for the Republic abolished that custom), swarm out in all directions; and had not the Russians in the middle of the last century established their power in the country south of the Baikal and all down along the Amur River to the sea, these regions would have soon been peopled by Chinese emigrants.

The last part of the way from Harbin to the Sea of Japan is, perhaps, the most

beautiful, for the soil is fertile, the pastures excellent, the landscapes charming, and the wealth of flowers surpasses that of western Siberia. Even after seven or eight days of unbroken travel from Moscow, the summer tourist comes reluctantly to the end of such a journey.

All that stopped in 1914. When will any tourist find the journey possible once more?

So soon as peace and order have been restored, under whatever government may rule, that government will begin to repair and equip the railroad; but to do this from end to end, through a country impoverished by years of war and blockade, will be no short or easy task.

So much for the Transcontinental Railway, the one great factor in the social and economic life of Siberia which those who wish to understand the country must keep always in mind.

Photograph from Horace Brodzky

TWO RUSSIAN GYPSIES OF IRKUTSK

Now let me speak of western Siberia in particular, and of the excursion into the Altai Mountains which I have to describe.

PREPARING FOR A TRIP TO THE ALTAI MOUNTAINS

In 1913 Siberia was just as open to travelers as was European Russia, but everywhere in the Tsar's dominions whosoever sought to diverge from a regular railway or steamboat route found that he could not get along without facilities granted by the government.

Before starting for the mountains it was therefore necessary to obtain letters of recommendation to local authorities, and the official permission to call for horses at post stations. To get these indispensables I went to Tomsk, the administrative capital of western Siberia, to present to the Provincial Governor the credentials I had brought along with me.

Tomsk lies fifty miles north of the Transcontinental Railroad, to which it is joined by a branch line. Why, considering the importance of the city, was not the main line made to run through it, there being no engineering difficulties to prevent this?

Every traveler asks this question, and receives—so, at least, I was told—the same answer. The Tomsk people did not pay a sufficiently high "gratification" to those officials with whom it rested to prescribe the course of the railway.

I was reminded of a like question and a like answer when, three years before,

Photograph from Ella R. Christie

FLOWER GIRLS AND BOYS AT A WAY STATION ON THE TRANS-SIBERIAN RAILWAY

being on the west coast of South America, I inquired why large sums were being expended on the construction of harbor works at Antofagasta when, only a few miles away to the north, there was a better sheltered bay at Mejillones. "Because," was the reply, "there was nobody at Mejillones to put up the money that was needed to outbid the people who wanted the harbor to be at Antofagasta."

WHERE COURTESY BECAME A TRIAL

We arrived at Tomsk at 1 a. m. and on stepping out of the cars were received by a bevy of uniformed officials, headed by the chief of the police, a grave personage, decorated with seven medals and six orders (crosses and ribbons). In Russia under the old régime orders and medals were distributed according to length of service and the satisfaction given to the superiors in the department, and the medals determined and indicated the salary paid, a useful method in a bureaucracy both of securing perfect subservience and of impressing the mind of the undecorated private citizen.

We were driven three miles through woods to the city—in Siberia, as in India, stations are apt to be far from towns—and lodged in a passable hotel, where, however, though it was August, no window was open or could be opened, and baths were unattainable.

No one spoke anything but Russian, and as I had forgotten the little I had learned thirty-seven years before, the position was difficult. Our police chief's sense of duty and politeness compelled him to remain along with us, though it was now 2 a. m. and our grateful and frequently repeated bows did not seem to intimate to him that his further stay was needless.

Searching up and down through a Franco-Russian phrase book, I could find, as usually happens, no sentence that fitted the occasion, but many that seemed

Photograph from Ella R. Christie

THEY HAVE HAD FEW TRAVELERS TO BUY THEIR POSIES DURING THE LAST SIX YEARS
(SEE ALSO ILLUSTRATION ON OPPOSITE PAGE)

designed for occasions far less likely to occur, among which I recollect this: "Have you seen the crocodile?"—a question singularly inappropriate in an empire none of whose waters are warm enough for that animal.

At last, however, we found words the equivalents to "Many thanks," and "Farewell," and the highly decorated Tchinovnik (the Russian term for a member of the civil service) departed, returning next morning to bring with him a Danish gentleman, a mining engineer, who spoke English and proved very helpful, discovering for us an interpreter to accompany us on our journey. We were surprised to find that in a city of sixty thousand people nobody, except one or two university professors, seemed able to speak either German or French.

CELEBRATING THE "NAME DAY" OF THE TSAREVITCH

When we awoke next morning all the bells were clanging, for it was the "Name Day" of the Tsarevitch, the delicate child destined one day, if his thin thread of life could be kept from breaking, to mount the imperial throne and rule over nigh two hundred millions of men.

All the functionaries of the city—military, civil, and educational, each

Photograph by W. W. Cutler, Jr.

A FREIGHT-BOAT ON THE OBI, ONE OF THE FOUR GREAT RIVERS OF SIBERIA

Rising in the Altai Mountains and flowing northward into the Gulf of Obi, an inlet of the Arctic Ocean, the Obi has a total length of 2,000 miles, 1,600 of which are navigable.

decked out with his orders and medals—flocked to the cathedral to attend the solemn service in honor of the day. The service was long, as those of the Orthodox Church always are, and only the sweet voices of the choirs relieved its tedium.

We knew that all over the Russian dominions, from the Baltic to the Pacific, every official and every priest and bishop was imploring the blessing of God upon the boy whose life was so precious.

As the worshipers bowed and knelt, as the voices sank and rose, what a wonderful thing, we thought, is this Russian Cæsarism, what a hold it has on the obedience, if not the affection, of its subjects, buttressed as it is by the Orthodox Church, with an omnipresent army of officials to execute its will! But within five years the innocent boy was, with his parents and his sisters, murdered in a cellar at Ekaterinburg, in the Urals, and not a Russian voice throughout what had been the Empire of the Tsars was raised in anger or in sorrow.

THE LEGEND OF TSAR ALEXANDER AS A HERMIT

Tomsk is a large, irregularly built town, straggling from a hill on which stand the cathedral, with its three bulbous domes, and the huge barrack-like university, where law and medicine were being taught to a thousand students, down to the river Tom, navigable for small steamers and carrying a considerable trade.

From the other side of the stream the place looks quite picturesque, brightened by the colors of the church domes and roofs, painted blue or light green, and the house roofs also often red or green; so the general aspect has, from without, a gaiety which the interior belies.

Of the inhabitants, all Russians, for the thinly scattered native tribes live far off to the north, about one-third are exiles or the descendants of exiles. Depressing as Europeans think life must be on a featureless plain, where snow lies more than half the year, they seem as cheerful as men are in Berlin or Rotterdam or London.

One strange tale is told, and universally believed, that the Tsar Alexander the First did not expire at Taganrog, on

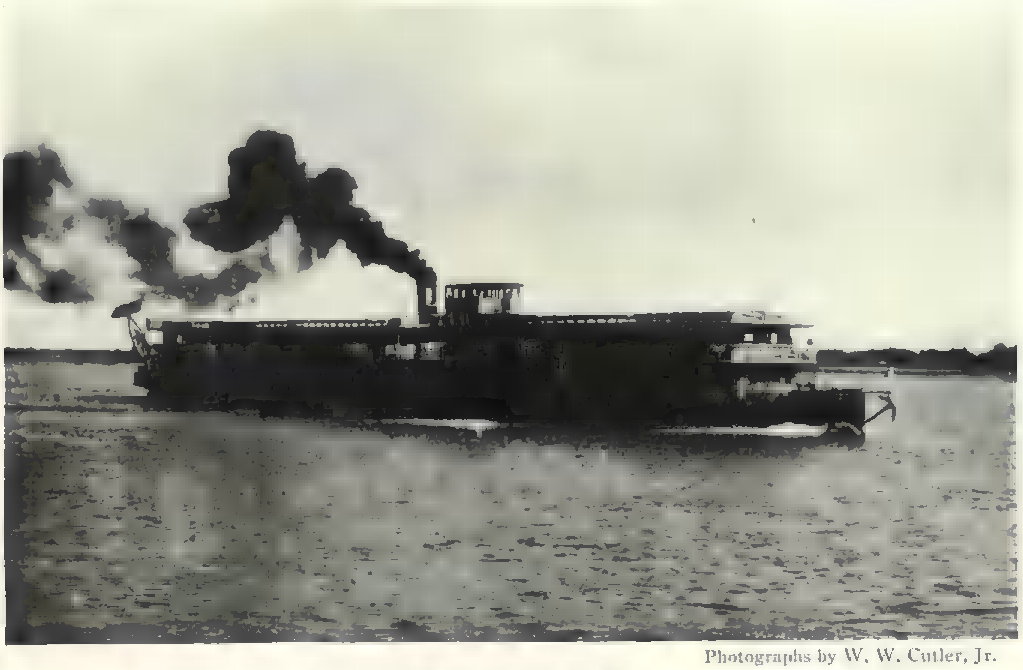
Photograph courtesy Department of Commerce

A VIEW OF OMSK, FORMERLY CAPITAL OF ALL WESTERN SIBERIA

Eighteen hundred miles east of Moscow. Omsk is the meeting-place of highways to middle Russia, Orenburg, and Turkestan. It is visited by violent sandstorms in summer and snowstorms in winter.

CROSSING THE RIVER OBI IN A ROWBOAT

Siberia has some of the largest rivers on the globe—the Obi, the Irtish, the Yenisei, and the Lena—but their value as freight carriers is greatly reduced by the fact that all have their outlet in the Arctic Ocean. For only a few weeks during midsummer can vessels from western Europe make their way through the Kara Sea, east of Novaya Zemlya, to the Gulf of Ob (Obi).



Photographs by W. W. Cutler, Jr.

A PASSENGER BOAT ON THE RIVER OBI

The cabins of these steamers are small and rough but clean. "From the deck one looks over a wide, smooth plain, the uniformity of the prospect in all directions broken only by the sweeps and curves of the mighty stream" (see text, page 485).

Photograph by D. A. Foster

AMERICAN ARMY OFFICERS IN A SIBERIAN WHEAT FIELD

Agriculture is the principal occupation of the natives of Siberia as well as of the emigrant Russians. It is estimated that half a million square miles of the empire are suitable for cultivation. The chief grain-producing regions are the Tobol and Ishim valleys, the marshy steppe between the Obi and Irtish rivers known as the Baraba, the territory around Tomsk, and the foothills of the Altai Mountains.

Photograph by Maynard Owen Williams

A GLIMPSE OF SIBERIA'S LUMBER INDUSTRY

South of the treeless northern tundras lies the almost illimitable forest zone of Siberia, abounding in birch, larch, and the conifers. With the improvement of transportation facilities, the lumber industry will prove an enormous national asset.

Photograph by D. A. Foster

CHILDREN AT PLAY IN ALEXANDRIA PARK, IRKUTSK

the Don, in 1825, as was supposed, but caused the body of a soldier who had died in the hospital at Taganrog to be represented and buried as his, while he himself secretly stole away in the garb of a pilgrim and made his way among a troop of emigrants to Tomsk, where he thereafter lived a religious life as a hermit till extreme old age.

I was told of men alive in Tomsk who, in their youth, had seen him, but no one could say whether the hermit encouraged the belief that he had been Tsar. If he did, he gained nothing from it, except freedom from molestation and additional veneration from the people. Slight as the evidence for the story seems to be, there was nothing in Alexander's character, pietistic and emotional, to make it impossible.

A MOUNTAIN LAND OF MYSTERY

Now, before I come to the journey, a few words on the Altai. It is the name given to the southwestern part of a great mountain mass which divides the lowlands of Siberia from the plateau of central Asia, sending forth on one side the great rivers that flow north to the Arctic Ocean, and on the other, the southern and drier side of the range, smaller streams that lose themselves in the lakes or marshes of Mongolia.

Most of this vast mountain land is unexplored, and only a small part has been surveyed for the purpose of locating the mineral wealth it is believed to contain. As a boy, I had sought to learn something about it

Photograph courtesy Department of Commerce

A VIEW OF IRKUTSK LOOKING TOWARD JERUSALEM HILL

The Irkutsk Cathedral, originally built of wood in 1693, was rebuilt of stone 200 years ago.

Photograph by D. A. Foster

THE VOZNESENSKI MONASTERY, FIVE MILES FROM IRKUTSK

This ecclesiastical establishment was founded in 1672 and contains the bones of St. Innocent. Most Russian churches are rectangular in form, with five brightly colored domes, the largest of which is in the middle, and each is surmounted by a Greek cross. In the lofty detached tower or campanile are the bells, which are not swung but fixed, only the clappers being movable.

from books of travel, and been able to discover scarce any that had aught to tell; and when I began to read the history of the East, curiosity was reawakened by finding that from the very beginning of history all these regions north and east of the Black Sea and the Caspian had remained unvisited and unknown from the days of Homer down to those of Marco Polo.

Unknown and mysterious, but also terrible, for out of the mists that shrouded them there came from time to time hosts of fierce horsemen, who broke like sudden thunder-storms on the civilized peoples of the eastern Mediterranean and of Europe.

As the Cimmerians and Scythians had descended on Media and Asia Minor and Syria long before the Christian era, so in the fifth century Attila led his Hunnish hordes across Germany into Italy and Gaul, followed by Avars and Bulgarians and Magyars, and in the thirteenth century there came the tremendous invasion of the Mongols under Genghis Khan.

Of this region of mystery and the great mountains that rise in its midst, it was possible to receive some impressions by diverging from the line of homeward journey along the Transcontinental Railway, so we seized the opportunity. Everybody told us that we should have plenty of discomforts or even hardships to encounter, but, being seasoned travelers, we were not deterred, and even, perhaps, put upon our mettle to see whether we could not still "rough it" as in former days.

To reach the glaciers and climb the great peaks would be impossible, for we had no tent or other equipments for high mountaineering, but we

could at least have a glimpse to make the mountains live as realities in memory.

A MUSHROOM TOWN IN SIBERIA

Our point of departure was the town of Novo Nikolaevsk, a mushroom growth of the years since the opening of Transcontinental line, for it stands at the meeting point of two great lines of trade—that of the Obi, which brings down the minerals and the grain and the butter from the south, and that of the railway which carries these products eastward to Irkutsk and beyond to the Pacific, westward to Russia and Germany. It reminded me of the new cities in the newest parts of America, with its big warehouses rising fast along half-finished roadways, while the untouched prairie, dotted here and there with scrub birches, lay just outside the houses.

In another ten years, had peace continued, Novo Nikolaevsk would have become the most populous place in all Siberia. By now it may have gone to pieces.

Steamers lay thick along the river bank; and in one of these we embarked. The cabins were small and rough, but clean; the food, scanty and unappetizing, was sufficient to support life; and though the days were hot with a strong August sun, the nights were cool, the dry air of the steppe deliciously fresh and invigorating.

From the deck one looked over a wide, smooth plain, the vast dome of heaven resting on a level horizon, the uniformity of the prospect in all directions broken only by the sweeps and curves of the mighty stream.

THE GRANDEUR OF A GREAT RIVER

Nothing in nature is grander than a great river. It embodies the irresistible strength of the forces of nature and their changeful activity, ever the same and yet ever different, here with a glassy surface, there swirling with deep eddies, making and unmaking islets, here eating away the bank, there piling up sand to enlarge it. It is older than man, and will outlive him: it is a part of his life, serves him in many ways, but it heeds not his coming or going.

These great Siberian rivers specially impress the imagination, because their sources lie in unexplored snowy solitudes, and from their middle course in habitable lands they descend into a frozen wilderness—*terra domibus negata*—to find their ending in an ice-bound sea.

We had just come from a long voyage up and down another famous river, the Yangtze, singularly unlike its Siberian sisters in this, that it is the central avenue of commerce through a highly cultivated country, passing on its way many cities swarming with people, and bearing on its bosom not only steamships, but fleets of sailing craft such as can be seen nowhere on Rhine or Danube or Mississippi, or even on the Nile, where once they carried all the traffic of the country.

Here, on the Obi, not a sail was to be seen and hardly even a rowboat. The steamer calls rarely, and then it is to discharge or take in freight, for passengers are few.

FEW VILLAGES ARE SEEN ON THE BANKS OF THE OBI

Like the Mississippi and Volga in their middle courses, the Obi has scooped out for itself a wide flat or depression about seventy feet below the general level of the steppe and swings itself hither and thither across this flat, so that when it is close under the high bank of the steppe on one side it is far from the high bank on the other side. The banks are of alluvial soil, and usually bare, but the low shores and the islands are covered with a growth of willows and poplars.

The few villages on the banks, usually where a small side stream comes down, are clusters of rough wooden huts, irregular and dirty, with the blue cupola of a whitewashed church rising in the midst.

The peasants, stalwart fellows in colored flannel shirts, crowd down to the landing place when the boat puts in; the women, not handsome, but with pleasant kindly faces, wear gaudy blue or red or yellow skirts, with handkerchiefs, mostly white, tied round their heads. All are Russians; it is only in the town of Barnaul, a commercial center to which all the minerals are brought, that one sees now and then an aboriginal nomad from the steppes to the south, over which hills, outliers of the Altai, begin to show themselves.

Photograph from Horace Brodzky

THE FERRY AT IRKUTSK, ON THE RIVER ANGARA, CHIEF OUTLET OF LAKE BAIKAL

In winter traffic is carried over the ice; in summer there is a pontoon-bridge (see illustration on opposite page). When the ice is breaking up and before the pontoon-bridge is swung into position, this ferry-boat is used.

A day and a night from Barnaul brought us late in the evening to Biisk, a place of some importance, to which all the butter coming from the vast pastures which lie all round is brought, and to which timber from the vast mountain forests beyond is floated down the river Biya, which, joined a few miles lower down by the river Katun, issuing from the Altai, forms the Obi. It lies at the edge of the steppe, here rising nearly two hundred feet above the stream, and is a brisk, thriving place, with a good many people of the middle class, traders and government officials.

Through one of the latter (whose tardy action I ought, perhaps, had I better known the "manner of the god of the land," to have accelerated in the proper Russian fashion) I managed to engage a tarantass, the only kind of vehicle for travel that is suited by its structure for the country it has to traverse. It seats four persons (two behind and one beside the driver), has four low wheels, and short poles supporting the low frame, which play, however inadequately, the part of springs in reducing the jolts and shocks of the rough cart tracks, full of stones and holes, which are here called roads. Beside the two horses, a third, running outside, is usually harnessed.

Our party included an interpreter and a police sergeant, told off to accompany us, not for protection, since the region is perfectly safe, but rather to insure our getting horses at the post stations on the way into Mongolia. We set off on Au-

Photograph by Maynard Owen Williams

THE PONTOON-BRIDGE AT IRKUTSK BEING PUT INTO PLACE IN SPRING (SEE ALSO ILLUSTRATION ON OPPOSITE PAGE)

The history of Irkutsk goes back to 1652, when winter quarters were established here by the Russians for the collection of fur taxes from the Buriats (see illustration, page 494).

gust 18, crossing the broad stream of the Biya in a large ferry-boat.

FLOORS OF POST STATIONS BETTER THAN THEIR BEDS

Each post station, which is bound to provide horses for travelers presenting a "Crown Podoroshna," has one or two small rooms reserved for the use of officials and called the Zemstvo Quartier; and passably furnished. There are usually two beds, but into these we never ventured, preferring to sleep on the light mattresses which, according to custom, we carried with us and laid on the floor. After a long day's jolting in the open air one can sleep on the hardest floor.

The people were always civil, and gave us what food they had, black bread, usually butter also, which was always good, and sometimes eggs, but vegetables were never, and meat scarcely ever obtainable. We had brought a tin of biscuits, with a little tea (needless, because it is the beverage of the country) and preserved meat and desiccated soup, the latter always to be recommended whenever hot water can be had.

We started every morning as soon as the horses could be got, and never reached the night's halting place till after dark, yet could seldom cover twenty-five miles a day, for the tarantass cannot, along such tracks, on an average, and allowing for the changing of horses, accomplish more than three or four miles an hour, and we might just as well, and with more pleasure, have journeyed on foot, but for the frequent swamps and occasional downpours of rain. Twenty-five miles is an easy day's walking in exhilarating mountain air, if one has no knapsack to carry.

A LAND OF MARVELOUS FLORAL BEAUTY

The first day's journey was over the rolling grassy steppe; the second brought us into soft valleys between the lower hills, valleys filled with flowers of many brilliant hues, such as one might find on the lower slopes of the Alps in July, for here the snow does not melt away till

Photograph by Maynard Owen Williams

EASTER MERRYMAKING IN THE GREAT SQUARE AT IRKUTSK

Irkutsk is the principal city of Siberia, 3,792 miles by rail east of Petrograd. It is the capital of the government of Irkutsk, which has an area 20,000 square miles greater than that of Texas. The building in the background is the Cathedral of the Virgin of Kazan.

May. They were mostly of west European genera, some of them British species—blue larkspur, columbines, and (if I remember right) the blue Jacob's ladder (*Polemonium*), purple and yellow aconites, campanulas, gentians, and the white grass of Parnassus (a plant widely scattered over the world), the tall pink willow herb, and, in great profusion, one of the most ornamental among British wild flowers, the purplish blue geranium (*Geranium pratense*). Such a wealth of color I have seldom seen.

On the third day we reached a charming hollow surrounded by cliffs, whose sheltered situation and pure air have occasionally drawn to it a few visitors threatened with tubercular disease. It would be an excellent spot for a sanatorium if the track were rendered passable for invalids and if there were an inn.

Not far off a Russian landscape painter had made a studio for himself in a hut. He was absent, and as it stood open, we saw the studies of Altaian scenery, which were decidedly clever, though rather hard in color. These were the only signs that met us during the journey to indicate that any one ever comes here from the plains except on official business or for the slender trade in Mongolian wool.

It was a singularly beautiful valley, bold rocks rising out of the forest and the splendidly bright torrent of the Katun sweeping down through pastures gemmed with Alpine flowers.

Desiring only to convey a general impression of the region, I will not attempt to describe the course of our wanderings, nor the difficulties encountered on rocky tracks and along the crumbling edges of deep ravines, nor in plunging through swamps where stones hidden in the mud sometimes all but capsized the luckless vehicle into the water.

Worse still were the risks we ran of being overset in the mire of the track

Photograph by Maynard Owen Williams

FERRIS WHEELS IN IRKUTSK DURING EASTER WEEK

In pre-Bolshevik days Irkutsk was the home of the Siberian branch of the Imperial Russian Geographical Society.

where it led into and through the villages, for here all the space between the houses was a bottomless sea of black farmyard filth, immersion in which would have left the traveler's clothes "a thing to dream of, not to tell."

ALTAI'S LOFTIEST PEAKS ARE AS HIGH AS THE MATTERHORN

All these and many other drawbacks to an Altaian journey are outweighed by the views one gets from the heights, as well as by the wild charm of the woods and the sparkling torrents that foam down the glens. In particular there dwells in my memory one panoramic prospect obtained from the summit of a mountain above the Semenski Pass, a little over three thousand feet high. From it we looked out over an immense stretch of rugged ridges and bare peaks rising one behind another to where in the far southeast snowy summits shone in the sunlight.

The two Belukha peaks (14,900 feet), believed to be the loftiest points in the Altai (about the height of the Matterhorn), were hidden by nearer heights. They are the center of a mass of glaciers, and round them the grandest crags and gorges are to be found.

Those gentler landscapes which we did see were always picturesque and sometimes charming, but not comparable in beauty to the finer parts of the Italian Alps or Pyrenees, or to the valleys of the Sierra Nevada of California, or to the majestic summits of the Caucasus.

Indeed, the Altaian scenery never reminded me of the Alps. It is more like that of the Canadian Rockies, or even perhaps the most secluded glens of the Scottish Highlands, though in the latter everything is, of course, on a much smaller scale.

What one found peculiarly impressive in the Altai was the sense it gave of an untouched primeval wilderness, remoteness and immensity. The very breezes, whistling or moaning through the trees, sound like

> ". . . . a wind that shrills
> All night in a waste land where no man comes,
> Or hath come, since the making of this world."

Civilization seems infinitely far away, for one is in regions where few signs

Photograph by Graham Romeyn Taylor

PEASANT CHILDREN IN A WESTERN SIBERIAN VILLAGE

Photograph from Horace Brodzky

VOLUNTEERS FOR THE WHITE GUARD CAVALRY AT IRKUTSK

"The communist doctrines of the Bolsheviks find no support in Siberia except among the few town workers" (see text, page 499).

Photograph by C. S. Stilwell

ITS HANDSOME RAILWAY STATION IS ONE REASON WHY IRKUTSK IS CALLED THE PARIS OF SIBERIA

"Nothing forbids the hope that the natural action of economic forces will, perhaps within a few years, install some sort of settled government in Siberia, able to enforce order and to permit men to resume their daily work in a normal way" (see text, page 507).

Photograph by Hugh A. Moran

THE IRKUTSK MARKET PLACE

Before the World War 100,000 industrious Russian peasants immigrated to Siberia annually. This is destined to become one of the great food-producing countries of the world.

Photograph by Hugh A. Moran

PEASANTS IN THE REGION OF FORMER PENAL COLONIES IN THE LAKE BAIKAL DISTRICT, SIBERIA

meet the eye to show that man has cared to dwell, or will ever care to dwell, in this wilderness, save to fell the woods and hunt the wild creatures that shelter therein. It is a land not to be thought of in terms of time and space, for in it nothing has ever happened to measure time by, and in space it exists only as the gathering place of the waters that feed the great rivers, as yet receiving nothing from without and as yet producing hardly anything to send elsewhere.

THE KALMUKS DWELL IN CONICAL HUTS MADE OF BARK

From a station on the route into Mongolia we were forced to turn back, for the tarantass, which had been frequently repaired, was pronounced unfit to carry us any farther along a track described as worse than that we had traveled; so it was evidently impossible to reach the central snows of Belukha.

Taking a more westerly track on the return journey, we passed between bare, bold mountains over several high table-lands, in some of which we met nomad Kirghiz, with their herds; in others Kalmuks, dwelling in round conical huts of bark, not unlike the Indian wigwams. The former were Mussulmans of Turkic stock, the latter Buddhist Mongols, but in both there remains much of the old Shamanist spirit worship, which prevailed over all northern and central Asia before the spread from Arabia and from India of the two great religions aforesaid.

The people are wild and unkempt, many of them wearing sheepskins or bearskins, but they are peaceable in aspect and with good, simple faces, not wanting in intelligence. Round the Kalmuk huts birch poles are fixed, from which flutter strips of white linen, apparently meant to ward off evil spirits.

Both races live off their sheep, cattle, and horses, drinking the milk of all three, but loving best the *koumiss*, made of mare's milk, which, when fermented, becomes intoxicating. Sometimes they cultivate a little patch of ground.

KALMUKS AND KIRGHIZ NEVER WALK

A Kalmuk or a Kirghiz never walks; like an Icelander, he jumps on his wiry little horse to go a hundred yards.

On these high plains we saw swarms of little burrowing creatures called tarbaghans, resembling the marmot of the Alps, scurrying to their holes as our vehicle approached, and at a spot where the ground was covered with the Alpine edelweiss (*Gnaphalium leontopodium*) for fully a square mile, we saw a long train of camels stalking over the pasture, a strange juxtaposition of the plant that in

Europe grows beside the glaciers with the denizen of the Arabian desert.

Once we came suddenly on a huge eagle, bigger than the sea eagle of North America or the golden eagle of Europe, sitting on a low rock surrounded by a parliament of crows. He rose very slowly at our approach and sailed deliberately away while the parliament dispersed. He may possibly have been a lammergeier, but did not seem to me quite the same as that splendid bird, which I once saw circling over my head on the top of a peak in the Engadine.

Of hawks and falcons there were plenty, as there are of wolves, bears, and lynxes; but the tiger, though he can stand cold—for he is sometimes seen on the shores of Lake Baikal, and puts on a thick coat of fur in northern Korea—does not in this region come farther north than the marshes of Lake Balkash, some hundreds of miles to the southwest.

Photograph by D. A. Foster

ALONG THE BAIKAL MOUNTAIN SECTION OF THE TRANS-SIBERIAN RAILWAY

"The line runs for many miles on a shelf cut out of the steep mountain side, with frequent tunnels through projecting cliffs" (see text, page 473).

A few days more through picturesque rocky valleys brought us down to the foothills, and thence over the steppe to the town of Biisk, whence we had started. There, after a farewell view of the mountains from the high bank above the river Biya, we embarked on a steamer even smaller than that which had carried us up.

Having now the current of the river to speed our downward course, we came in three days, making a long halt at Barnaul, a dreary place in the dreary hours of rain we had to spend there, back to Novo Nikolaevsk, where we were hospitably entertained by the representatives of the great American firm which supplies agricultural machinery to half the Russian world.

THE ALTAI MOUNTAINS AS A POSSIBLE PLAYGROUND OF ASIA

Here we rejoined the railway; here we boarded the train which was to carry us to Omsk and through the Urals to Moscow and Petersburg (Petrograd), and Königsburg, ancient capital of the Teutonic Knights; and so on to Berlin, where, ten months before the fatal days of July, 1914, we were told (and, as I

A BURIAT MAN AND FOUR WOMEN ASSOCIATES

Photographs by D. A. Foster

A GROUP OF BURIATS NEAR CHITA, EASTERN SIBERIA

The Buriats are a broad-shouldered, stalwart people of nomadic tendencies. They are noted for their devotion to their horses, and when a Buriat chief dies his steed is tied to a stake at his grave, there to die by starvation; but the thrifty heirs usually confine the horse by slender cords in order that it may break away. Note the members of the American Expeditionary Force to Siberia in the background.

believe, honestly told) by a high official of the Foreign Office, that the diplomatic relations between Germany and England had been steadily improving.

Whether the Altai will ever become the mountain playground of Asia, as Leslie Stephen called the Alps the playground of Europe, may be doubted, for the Altaian landscapes, varied and charming as they are, and sternly grand as is the high glacier region, have not the more exquisite charm and the more inexhaustible variety of the Swiss and Italian Alps. But they and the lofty ridges that continue the great line of elevation as far as the river Amur are the only Asiatic ranges in which mountaineering can be enjoyed as we enjoy it in Europe or as Americans enjoy it in the Sierra Nevada and Rocky Mountains.

The Himalayas are incomparably grander, but there the summers are wet and intensely hot, and both the heights and the valleys are on a scale too vast for average human powers. To cross one single gorge like that of the Teesta below Darjeeling, descending 7,000 feet, and mounting another 7,000 to the opposite edge, is work enough for a long day under an Indian sun.

Nevertheless, less interesting as are the Altai, there will some day be much delightful exploration; and some fine climbing will be done in the thousand miles of lofty Siberian mountains, east of the 85th meridian of east longitude. Doubtless, American and Canadian, as well as British climbers, will be found to do it.

Hunters, also, will come, and for a time at least they will find a fair number of wild creatures to destroy—deer, though scarce any elk, as well as wolves and bears and lynxes, and the ibex that haunts the high crags, and in some spots on the Mongolian side of the range, the rare mountain sheep (*Ovis ammon*) with the great curved horns, a creature which, it is to be hoped, they will not be allowed to extirpate.

Though disappointed, owing to the difficulty of making the preparations requisite, at not having been able to make an effective reconnaissance of the approaches to the great peaks, we returned to civilization—half famished, indeed, but sound in health—with the satisfaction of having seen new and most interesting aspects of nature and having caught glimpses of the life of ancient nomad races.

From Siberia we carried back the recollection of a land of large, free, breezy, sunlit spaces, beautiful in summer, with a glorious abundance of flowers, and the impression of a people more cheerful and prosperous than we had expected to find in a country hitherto associated with the cruelties of a tyrannical government and the sorrows of lifelong exile.

THE ECONOMIC FUTURE OF SIBERIA

Something must now be said of the economic future of Siberia, a subject that will become of high significance to the world, for the country contains the one hitherto imperfectly developed region in the temperate zones that has the greatest possibilities of future development for the production of food.

Omitting the districts in eastern Siberia, comparatively small districts, that are fit for agriculture, and omitting, also, the larger and more fertile regions along the river Amur, which Russia acquired seventy years ago, there are between the Urals and the river Yenisei thousands of square miles available either for pasture or for cultivation.

Into this region there had been flowing, mostly from central Russia, a steady stream, averaging 100,000 per annum, of industrious peasants, to whom the government gave farms. Though there were some large estates, Siberia has been, broadly speaking, a land of occupying farmers, very ignorant and living very rudely, but intelligent and laborious.

The cultivated area was being steadily extended, and beyond it, especially along the Obi and the middle course of the Irtish, the rich pastures were supporting an increasing number of cattle, so that an immense trade in butter had sprung up. Most of it was bought by Danish merchants and dispatched in refrigerating cars to western Europe, to be there sold as Danish butter.

Thus, in 1913, the country was thriving, with every prospect of a rapid growth in wealth and population. There were few manufacturing industries, but the minerals hidden in the long mountain

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A STREET SCENE IN VERKHNE-UDINSK, 300 MILES EAST OF IRKUTSK

This prettily situated town is the headquarters of the Western Trans-Baikal mining administration. It is the junction point of the two great highways of northern Asia. Southward stretches the road to Kyakhta, to Urga (the capital of Mongolia), and to Peking.

range that divides Siberia from Mongolia are believed to be of immense value. That they had not been better ascertained and exploited, and that all the resources of the country had not been more swiftly developed, was attributed to the incompetence and, above all, to the corruption of the imperial administration—a deeply rooted evil, which neither well-meaning emperors nor an energetic minister, if one now and then appeared, had been able to cure.

Had Siberia been in the hands of Americans or Canadians from 1870 to 1910, its revenues and population would have been double what they were in the latter year, for the internal river communications would have been improved and the railway tracks into European Russia would have been duplicated or triplicated.

In 1913 men were discussing one expedient for increasing the trade of the country which a more enterprising government would have done its best to

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A TUNGUSIAN GIRL OF EASTERN SIBERIA

The Tunguses are at home throughout central and eastern Siberia, from the Yenisei River to the Pacific. Broad, flat features, with small nose, thin lips, and dark, oblique eyes, are characteristic of this Mongol-Tatar people. They are a cheerful, brave, self-reliant, modest, and hospitable race of hunters, making their home chiefly in the midst of dense forests.

favor. The greatest want of Siberia is cheaper transportation for its heavy products to European markets, especially to those of Germany, France, and England, and that which most reduces the value of its great rivers as freight carriers is the fact that their mouths in the Arctic Ocean are difficult of approach, even in summer, because vessels may get caught in the Kara Sea east of Novaya Zemlya, and even if they reach the Gulf of Ob (Obi), may be unable to return with the cargoes they have loaded.

The employment of wireless telegraphy may be expected to immensely reduce this risk, for by means of it approaching or departing ships could be kept informed from various points regarding those parts of the sea which may be open—and there are always such parts in July and August—and their course could be directed accordingly.

Photograph by C. S. Stilwell

A TRANS-SIBERIAN TRAIN DE LUXE IN WAR TIME: NOTE THE MEANS OF INGRESS TO THE BOX-CARS

The total length of the Trans-Siberian Railway with its branches is more than 5,400 miles, including the more than 1,000 miles in Chinese territory. It was begun in 1891 and virtually completed by 1902, the total cost being estimated at more than $435,000,000. It is the one great factor in the social and economic life of the country which those who wish to understand Siberia must keep always in mind.

Photograph by D. A. Foster

THE CHINESE EASTERN RAILWAY STATION AT NIKOLSK USSURIISKII

Nikolsk Ussuriiskii is a town of 50,000 inhabitants, sixty miles northwest of Vladivostok. In peace times it was a popular resort for sportsmen seeking musk-deer and wild boar.

Photograph from Horace Brodzky

A CROWD IN FRONT OF AN OPEN-AIR THEATER AT A CHINESE FAIR IN KYAKHTA, SIBERIA

The crowd contains Chinese, Mongolians, Russians, Tatars, Buriats, and a few Europeans. There is no scenery at these shows. The "announcer" tells the spectators what scene they must imagine. The costumes of the actors, however, are very beautiful, elaborate, and costly.

As far back as the days of the Tsar Ivan the Terrible and the English Queen Elizabeth, a bold English captain tried this route with success, and there is reason to believe that nowadays vessels fitted with wireless apparatus could make pretty sure of safe voyages to and fro.

NOT A FERTILE FIELD FOR BOLSHEVIK DOCTRINES

The economic progress I saw in 1913 was arrested by the war which broke out in Europe just a year later; and in 1917 there was fighting in Siberia itself between the Bolsheviks, who had then seized power in European Russia, and their opponents, who were organized for a time under Admiral Kolchak.* The Bolsheviks prevailed, not because the Siberian peasants adopted communist doctrines, for those doctrines find no support in Siberia except among the few town workers, but because the men who surrounded the unfortunate and entirely well-meaning Kolchak made themselves detested; so that his forces, at first successful, ultimately melted away before the Bolshevik advance with very little resistance.

What is happening in Siberia as I write these lines, in January, 1921, few people in western Europe know, and I am not one of them, but evidently the economic conditions must have gone sadly back since 1913. When will progress be resumed? When will the setting up of a stable and tolerably enlightened government make progress possible?

No sensible man will venture to prophesy about Russia; but one thing at least may be said: In the long run, eco-

*See "Glimpses of Siberia, Russia's Wild East," in the NATIONAL GEOGRAPHIC MAGAZINE for December, 1920.

Photograph from Horace Brodzky

THE "HOT-DOG MAN" AT A MONGOLIAN FAIR, AT KYAKHTA, ON THE SIBERIAN-CHINESE BORDER

Note the oddly notched rim of the cart-wheel in the left background—ancestor of our modern non-skid tires. Kyakhta was for many years the great emporium for the caravan trade between Russia and China. The completion of the Suez Canal and the construction of the Trans-Siberian Railway robbed it of its importance. Over the border, on the Chinese side, is the town of Maimatshin.

Photograph from Horace Brodzky

MONGOLIANS AT MEAL-TIME ON THE STEPPES OF SIBERIA

The man on the right is a Russian. The chief item on this menu is boiled meat. A Mongolian never eats bread and seldom vegetables. He drinks the soup from the boiled meat and then lifts out a chunk of flesh, holds one end in his mouth and cuts off a piece with his big knife. A Mongolian eats only once a day, at noon or in the evening, when he consumes from five to ten pounds of mutton or beef. In the winter he carries the meat under his saddle, which keeps it from freezing.

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SACRED BREAD: SIBERIA

The greatest feast in the Russian year is Easter. Religious ceremonies are held in the churches lasting several hours after midnight and terminating with the curious ceremony of blessing the Easter cakes. Instead of the customary cross, the bread shown in the illustration is capped with the Mohammedan symbols of moon, sun, and flame.

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A SHAMAN FEAST: SIBERIA

Shamanism is the primitive religion of certain tribes in Siberia, but in most cases practiced under an outward show of newly introduced religions, either Christian, Buddhist, or Mohammedan.

Photograph by Hugh A. Moran

THE LAST EXPRESS TRAIN TO GO THROUGH FROM VLADIVOSTOK TO PETROGRAD IN FEBRUARY, 1918: BAIKAL, SIBERIA

nomic factors are sure to prevail. They assert themselves, because revolutionary disorders never last very long, since it is the general interest of the vast majority in every people to see a stable administration established; and when some strong man, or group of men, possessing the gift for rule have established it, the self-interest of the rulers prompts them to occupy the energies and promote the well-being of their subjects by extending facilities for trade and industry.

SIBERIA'S HISTORY IS ALMOST A BLANK

A few concluding words may be said as to the future generally. The history of Siberia was almost a blank, and had little interest for the world at large, till 1917. The men of Great Novgorod had occasionally sent trading or raiding bands across the Urals in the eleventh and twelfth centuries, and the first invasion was under a robber chief, named Yermak, who led his followers into the country in 1580. But thereafter the process of conquest and colonization went on unnoticed by Europe, with no serious resistance from the aboriginal inhabitants, who were weak and loosely scattered savage tribes.

Thus there were really no events for historians to record; the process went on gradually and unobserved. The racial character of the Russian immigrants has (except in the Far East) been scarcely affected by any infusion of aboriginal blood, and so far as the Siberian Russians differ from the Russians of Europe, they are nowise inferior.

Serfdom never existed in Siberia. The immigrants were mostly more enterprising than their brethren who stayed at home. The exiles, banished for political offenses, real or alleged, often came from the intellectual élite of Russia, while the descendants of criminal convicts did not permanently stain the population, although some of those who escaped used to range the country as robbers.

Taken as a whole, the Siberians, if not fit to work democratic institutions, are quite as capable of local self-government as are the peasantry of European Russia and just as unlikely to become Communists of the Marxian or any other stripe.

WILL SIBERIA REMAIN A PART OF RUSSIA?

So far as I could learn, the only class in which political discontent or any signs of an interest in politics existed had been the students in the university, who occasionally "demonstrated" or "struck work" when some particularly offensive piece of tyranny proceeded from the university authorities acting at the instance of the ecclesiastic authorities. There have been ferments among the students everywhere in Russia for the last half century; and now and then professors have been dismissed or exiled.

Photograph by Maynard Owen Williams

THE SPIRIT OF SIBERIA

Yellow sunset and boundless expanse of fine country, in the midst of which a raging forest fire is sending up a wisp of smoke more than twenty miles away. The photograph was taken from a swiftly moving train.

Whether Siberia will remain politically a part of Russia, it is impossible to predict. An able English observer, who traveled there forty years ago (the late Mr. Ashton Dilke), told me he thought Siberia would break away, peaceably or otherwise; but nothing I could learn in the country confirmed that forecast.

The Transcontinental Railroad has become a bond of union, and the Ural Mountains, though they would form a good natural boundary if the peoples living on each side differed in race, speech, and religion, do not, the facts being what they are, constitute a barrier worth regarding.

It is much to be wished that they were such a dividing line, for the Russian Empire before 1914 was an unwieldly mass, too big for any one set of men to govern, even had such men been more capable than any Russian ministry has ever been.

Yet in 1913 the Russian Government, moved by that insane impulse which induces states to extend territories already too large, was trying to establish political control over Mongolia as far as the frontiers of China.

The portentous expansion of Russian dominion and the growth of Russian population had become a danger to the world. It was a danger much reduced by the stupidity and corruption of the government, but if a malign fate had set a genius like Frederick the Great or Napoleon on the throne of the Tsars, things might have gone ill for Europe.

PERHAPS A UNITED STATES OF SIBERIA

For its own sake, as well as for the world's sake, it is much to be desired that Siberia as well as Transcaucasia should be disjoined from Russia; and if the inhabitants of Siberia were capable of working a system of federal govern-

Photograph by Eugene Lee Stewart

MONGOLIAN OFFICIALS SEATED BEFORE LAMAS WHO ARE CONDUCTING A RELIGIOUS CEREMONY

Ordinarily the queue is concealed under the hat, but it must be let down while religious ceremonies are in progress.

ment, such a system, consisting of five or six federated states between the Urals and the Pacific, would be better than one huge unitary empire or republic.

What sort of political future may this or the next generation expect to see?

Neither Russia nor Siberia is likely to enjoy free popular constitutional government within any period which conjecture can now assign. But neither is it likely that the economically ruinous despotism which now rules both countries will long endure, or that the incompetent despotism of the Tsars will return.

There may be a time of strife, for the habit of obedience has been broken, and there is now no legally constituted authority for the citizen to obey. But anarchy never lasts long.

Nothing forbids the hope that the natural action of economic forces will, perhaps within a few years, install some sort of settled government, able to enforce order and to permit men to resume their daily work in a normal way.

So soon as Siberia obtains such a government, her economic resources and the industry of her people will enable material progress to start afresh, and she will some day become what western America became fifty years ago and Argentina became thirty years ago—one of the great food-producing countries of the world.

THE PEOPLE OF THE WILDERNESS

The Mongols, Once the Terror of All Christendom, Now a Primitive, Harmless Nomad Race

By Adam Warwick

THE cancellation of Mongolian autonomy by China in November, 1919, and the subsequent trouble at Urga, their capital, have once more drawn attention to the "People of the Wilderness," as the Chinese, with thinly veiled contempt for all who dwell beyond the borders of their own civilization, call their neighbors, the Mongols.

Mongolia is a land with a great past. Seven hundred years ago Genghiz Khan set out from its barren steppes to conquer the world, and swept all before him from the Yellow Sea to the Adriatic. Dazzled though we may be by the magnitude of modern warfare, we stand aghast at the unexampled record of his hundred thousand horsemen, who made a three days' victorious march across a hostile land from the Carpathians to Budapest, with minor expeditions deep into Bohemia, Germany, and Serbia.

ALL CHRISTENDOM FEARED THE TATAR CHIEF

In those stirring times the world so feared the Great Captain that a special prayer, "Save us from the fury of the Tatars," was introduced into the Christian litany.

It was no idle dread. But for the death of his successor, which imposed three years of mourning and inactivity on the troops, the Mongol forces could not have been stopped by any earthly power until they had reached the limit of the continent of Europe.

Forty years after the disappearance of the Mighty Conqueror (1227), a grandson, Kublai, crowned his triumphs by becoming, not only the master, but the enlightened, magnificent monarch of the whole of China, Indo-China, Burma, Korea, Borneo, and Sumatra. Unfortunately for his dynasty, the settled life of ease and luxury in Peking sapped the vigor of his followers in a single century.

One more great leader was to appear among them in the person of Timur the Lame (Tamerlane), born to subdue Iran and Turan, defeat the growing power of the Turks, and fire Moscow, thus blazing the way for his last descendant, the kindly knight-errant and poet, Sultan Baber, to found the Empire of the Great Mogul.

Photograph by John B. Rogers

THE TOMB OF TIMUR THE LAME (TAMERLANE) AT SAMARKAND, RUSSIAN TURKESTAN

The body of this renowned oriental conqueror, who died in 1405, was embalmed with musk and rose water, wrapped in linen, laid in an ebony coffin, and sent to Samarkand, where it was placed in a sarcophagus of jasper. The tomb consists of a chapel crowned with a dome. Both time and earthquakes have left their mark on the structure, but the interior is still beautiful with turquoise arabesques and inscriptions in gold.

Photograph by Graham Romeyn Taylor

THE DOOR TO THE TOMB OF TIMUR THE LAME

The Mongol leader has been variously painted by his biographers. To some he seems merely "a deformed and impious person of low breed and detestable principles"; to others, a sort of demi-demon, like Richard III. The magnificent but now crumbling summer palace, mosques, and colleges in his capital city of Samarkand bear witness to the fact, however, that Timur and his immediate successors were splendid patrons of architecture.

Photographs by Adam Warwick

A MONGOL PRINCESS IN FULL COURT DRESS

A MONGOL PRINCE, DESCENDANT OF GENGHIZ KHAN

They are the scions of a race of conquerors who for a short time struck terror to the hearts of Christendom. Only a custom which required the hordes to observe a mourning period of three years following the death of their leader saved Europe from a Mongol inundation during the first half of the thirteenth century.

MONGOLIAN BOYS OF THE BARGOO TRIBE

The cut and pattern of their robes about the neck are distinctive of their tribe.

SONS OF MONGOLIANS OF THE OFFICIAL CLASS

The youngster at the left is not at all frightened by the camera, but sand blew in his eye when he was trying to pose his best.

Photographs by Eugene Lee Stewart

Photograph by Eugene Lee Stewart

A MONGOLIAN OF THE OFFICIAL CLASS

He is wearing a handsome brocaded yellow silk robe and an ornate necklace of wooden beads. Woven into the robe is an elaborate dragon pattern.

But the fall of the Mongols was scarcely less rapid than their rise. In China they were able to hold sway only eighty-eight years. Elsewhere their empire crumbled quickly, leaving only isolated remnants under their dominion, until today the unhappy heir of Sultan Baber sits forlorn and impotent beside the Ganges in a badly cut frock coat, with the crown of the King of Delhi on his head.

MANCHUS SUCCEEDED MONGOLS IN CHINA

When events shattered their dream of world power, the Mongols retired once more within the confines of Mongolia proper, where they have lived for centuries in peaceful isolation. The population, thinned by war to 2,600,000 souls, is spread over a vast territory embracing 1,367,000 square miles—an area more than one and a half times as great as the United States east of the Mississippi.

The Manchus, who took over the rule of the Mongols in China, exercised only a nominal control over them. Indeed, Manchu official feet never trod many parts of interior Mongolia, and the local Mongols were allowed practically to govern themselves, preserving their original tribal organizations, headed by native princes.

When the Manchus disappeared, the People of the Wilderness, who had never recognized any Chinese rights over them, declared their autonomy and lived contentedly under their self-appointed ruler, the "Hutukhtu," or Bogda Khan (the third Living God in the Lamaist hierarchy, whose temple palace is at Urga), until the fatal day when the Chinese Republic canceled their right of self-determination.

The stage on which this drama of Far Eastern politics took place was too remote to awaken the interest of the powers. Location, climate, and, above all, lack of communications—for Mongolia cannot yet boast a single railway, although there are plans for a line from Kalgan to Kyakhta and only recently a motor-car service has been started across the steppes to Urga (550 miles)—shut off the country from the rest of the world.

We still know little of Mongolia's resources. Gold mines certainly exist there (one of which, the "Mongolor," is beginning to be developed by American capital), as well as silver, copper, and coal mines. The rivers abound in fish, the forests in valuable timber and fur-bearing animals, while the great tablelands have farming potentialities equal to Texas and Nebraska.

But the primitive Mongols derive little benefit from these riches. Like

Photograph by Eugene Lee Stewart

A CHINESE MAN IN FANTASTIC GARB, MOUNTED ON STILTS

He is participating in a Chinese New Year's parade in Hailar, a town in Manchuria near the Mongolian border (see also illustration on page 520).

Photograph from Horace Brodzky

A MONGOLIAN WOMAN OF THE WEALTHIER CLASS WITH HER DAUGHTER

Note the string of beads in her hand, with which she toys; also note the talisman the girl is wearing. The mother has on her summer hat of black velvet. It is not easy to get a picture of a Mongolian child, for there is a superstition that Europeans use the eyes of children to make the lenses of their cameras.

Photograph by Eugene Lee Stewart

A CAPTAIN IN THE MONGOLIAN ARMY

He is wearing his state robes and wooden beads and is ready for attendance upon an outdoor religious ceremony. The chief difference between the garments of the men and the women is that the former gird themselves with a belt. The usual word for woman in Mongolia is "beltless."

Photograph by Eugene Lee Stewart

MONGOLIAN SCHOOLMASTERS

The man on the right is Mr. Gobel. He has had four years of college at Peking, speaks Chinese, Mongolian, and Russian fluently and quite a bit of English. He is principal of the Mongolian school at Hailar and has seventy boys learning Chinese and Mongolian and studying geography, history, reading, and writing from Chinese text-books. His assistant (at the left) studied at Tsitsihar, in Manchuria.

the lilies of the field, "they toil not, neither do they spin." They are a shining example of how men by reducing their needs reduce their anxieties.

Financial crises cannot affect them, for money as a medium of exchange is little used on the plains, where brick tea has more value than minted dollars. Municipal affairs do not concern them, for they build no cities, leading a migratory, care-free existence. They need no roads: the illimitable steppe is a natural highway where nations can pass without crowding. They require little water: in their climate men cannot wash. They want no electricity: at sundown, after a long day in the saddle, they are ready to lie down and sleep. Finally, the increasing cost of living does not trouble them, since it costs them nothing to live except the care required to guard their herds from wolves.

These herds provide them with clothing, with food, with transport, with fuel even. All over the grass-lands the flocks graze freely, watched by men unchanged since the days of the Great Genghiz.

Living an easy, open life—a life of true liberty, remote from courts of justice and police—the Children of the Wilderness willingly abide by his ancient code of laws, simple, logical, humane, and admirably suited to their nomadic habits. Their lumbering ox-carts were designed in his day; their sheep and horses are the original native breeds: the ancestors of their camels carried the silken tents of the Conqueror.

"SHIPS OF THE BURNING SANDS" GAMBOL IN THE SNOW IN MONGOLIA

Mongolian camels are superb beasts, very different from the ugly, flea-bitten, one-humped Arabian variety. In all the glory of their winter coats—for, strange

to say this species thrives in the cold and even delights to gambol in the snow—they are pictures of stately dignity, though in summer, when the long hair falls off in patches, they become repulsive-looking.

Winter or summer, however, these camels retain the objectionable character that Kipling has immortalized. Their breath is so poisonous that it is said no camel-driver lives long. Their kick will overturn a motor car. Their bite, followed by a twist of the lower teeth, generally induces blood-poisoning.

Particularly vicious males are marked with a piece of red cloth tied to the forelock, warning the stranger to beware. The Mongols know from experience that even a horseman is not safe from the determined onslaught of a furious camel, who can outgallop a pony and has a nasty, effective trick of throwing beast and rider and then rolling on them.

Photograph by Eugene Lee Stewart

LAMAS POSING FOR THEIR PICTURE

The tall man is a Tibetan and the smaller a Mongolian. The Tibetan Lama is arrayed in gorgeous yellow silk robes and hat and the Mongolian Lama in red silk with a jacket of yellow silk and red hat. Before posing for his picture the latter repaired to his tent and procured the handsome necklace which he is holding.

THE MONGOL HALF-SOLES HIS CAMEL

Though the largest camel will bear only a comparatively small load, lying down and squealing if an extra pound be added, he is the only freight-carrier that can cross the desert, and even he, after some days traveling in the sand, wears his feet to the quick. When this happens the Mongols throw the limping animal on his side, put his foot on a low stool, and cover the tender part with a patch of leather attached by thin thongs drawn through the adjacent callosities of the sole, much as a cobbler mends a shoe.

The camel may be useful, but the horse is much more popular among the Mongols. The native breed, indigenous to the country, is seldom over thirteen hands high and rarely beautiful. But for endurance, cleverness, and originality, the little Mongol pony has few rivals. In the depth of winter his owner neither feeds him nor provides him with shelter.

An extra growth of hair and thickness of hoof (for he is never shod) protect

Photograph by Luther Anderson

COYNESS IS NO PREROGATIVE OF OCCIDENTAL WOMANKIND

One would never suspect from her jovial demeanor and her gala costume that this Mongolian woman leads a rather lonely life in her felt-covered yurt (seen in the background) while her lord and master is tending his herds on the steppe. Her neighbors are few and far apart, and her chief opportunity for social intercourse is found during the fairs (see text, page 541).

him against the bitter cold. As for his food, this intelligent little beast learns to scrape away the snow with his forefeet and find the sparse remains of the summer grass underneath.

WILD PONIES OF MONGOLIA ARE CAUGHT WITH POLES

Though mares, easily distinguished by trailing manes and tails, are kept at home for breeding purposes, Mongol ponies are exported in great numbers to China. They roam the plains freely until wanted, and are then captured in a curious way.

Two or three Mongols start out together on fleet mounts specially trained for their work. The riders carry long birch poles, like fishing-rods, with a rope noose at one end. When the chosen animal is overtaken, the noose is slipped over its neck with a dexterous twist (see illustrations, pages 528, 529, and 530).

One man then dismounts and, squatting upon his haunches, seizes the terrified animal by the tail. Like the proverbial dog with the tin can, he starts off at a run, dragging the man behind him. The latter slides along over the grass in his soft felt boots till the beast stops exhausted. Then he is easily thrown and a saddle fixed on his back.

Again the animal struggles, squealing like a pig meanwhile, but a strong rider manages to mount him, and after a few minutes the pony is considered tamed and fit to be ridden—by Mongols, at least.

FIELD-MICE OFTEN CAUSE DOWNFALL OF EXPERT HORSEMEN

Expert horsemasters from childhood, both men and women are equally at home in the saddle. In fact, the pony is man's inseparable companion on the steppes, and the Mongol, who will never walk if he can help it, develops an unsteady, rolling gait when ill-luck forces him afoot.

The plains, stretching for miles and miles, would be ideal riding country but for one defect. Falls with fatal results are sometimes occasioned by hollow ground. Field-mice and marmots excavate galleries a few inches below the surface of the earth, and a pony passing over these must go through. Such dangerous spots are usually distinguished by a different color and appearance, but sometimes even a practiced eye may be at fault, especially in early spring, when large tracts of the plain are accidentally fired by passing caravans.

James Gilmour tells an amusing story of an accident due to a few moments' inattention—quite enough to bring down the best horse and rider.

"My guide was before me," he says in his "Travels," "and we were going at a

rapid pace when all of a sudden I saw his horse with its head turned toward me, its four feet in the air and its rider uppermost.

"My guide was a large man and was considerably crushed, though it is strange he was not more hurt by so bad a fall. Both his saddle girths were burst, but, true to his Mongol instinct, he held fast to the bridle. After a little while he recovered and set about repairing the damage.

"As we had no spare strings or straps with us and were far away from human habitations, I wondered how he would do this. But without hesitation he took a handful of hairs from the tail of his pony, twisted and plaited them together, and in a few minutes the straps were as strong as ever.

"Luckily for the careless Mongol horseman on a journey, who is apt to forget anything that can be left behind, the tail of his horse, which is never 'docked,' makes up for all deficiencies."

PONIES ARE GRADUALLY STARVED BEFORE A RACE

As is only natural among such confirmed horse lovers, races are a popular amusement in Mongolia. But races on the steppes are conducted quite differently from ours. Even the preliminary training of the entries seems topsy-turvy to us.

Each competing pony is tied to a rope picketed on the grass plain. This rope is shortened every day by a certain number of inches, thus reducing the circle in which the animal can graze. Yet, strange as it may seem, this method of gradual starvation—tested by centuries—appears to increase rather than diminish its endurance.

On the day of the race fetlocks are clipped and manes and tails tightly plaited with varicolored ribbons, so as to offer as little wind-resistance as possible. The jockeys are children, and it is not unusual to see lads of nine or ten start on the exhausting stampede which a Mongol race really is.

No saddles are allowed, but each rider is given a heavy whip and a handkerchief. With the latter he leans over and wipes the dust from the eyes and nostrils

Photograph by Eugene Lee Stewart

A LAMA PAYING HIS CAB FARE IN A MONGOLIAN BORDER TOWN

His name is Yoongadoong. He belongs to the Hkalka tribe, and is attired in new flaming red robes, cap, and black boots trimmed in green.

Photograph by Eugene Lee Stewart

MONGOLIAN WOMEN OF HAILAR IN HOLIDAY ATTIRE WATCHING A CHINESE NEW YEAR PARADE

In the right foreground are a Chinese man, a Chinese girl, and a Mongolian man.

of his mount, as otherwise the dust of the steppe might injure wind or eyesight.

RACING PONIES LEAN ON EACH OTHER FOR SUPPORT

The straight course is so long that often there is a good deal of difference in time between the arrival of the ponies.

Enthusiastic owners or spectators, including bishops and archbishops of the Lamaist faith (for the church does not frown on racing on the plains), gallop out to meet the contestants and assist in whipping them in. But sometimes two favorites arrive at the finish literally leaning against each other shoulder to shoulder. Thus they support each other on the run, though both are so exhausted that if they were suddenly separated they would drop in their tracks.

Wonderful tales are told of the distances covered by famous Mongol racers at a stretch. Fifty, even a hundred, miles at full gallop are claimed. This is doubtless exaggeration, but fifteen- and twenty-mile races at great speed are well authenticated.

After the "meeting," the crowd usually adjourns to some neighboring monastery, where a festival in honor of the day is held.

A RELIGION OF TERROR

In Mongolia monasteries are the great centers of amusement, interest, culture, and—wickedness (see illustration, page

Photograph from Horace Brodzky

A MONGOLIAN SOLDIER SMOKING HIS PIPE

The Mongolian never drinks water or anything cold. He uses brick tea, made of tea dust from Chinese factories. A "brick" is as hard as granite. When a Mongolian wants a drink, he wraps the brick in an old cloth and places it in hot cow dung until it gets soft enough to enable him to break off a piece. This piece he grinds in a mortar and boils up in a horrible mess with milk or lumps of fat. He uses salt instead of sugar in his tea. He has a method of boiling his milk that makes it look like custard.

544). The priests exercise complete sway over the people by their unlovely religion of terror, the Tibetan form of one of the later sects of Buddhism known as the Tantric—a revival of the morbid Indian cult of Siva.

This repulsive creed, with its hideous demonology, is so well suited, however, to a land where cruel and tremendous atmospheric phenomena make man appear a helpless atom struggling against the mighty natural forces of existence, that it prospers.

Like frightened children, the People of the Wilderness desire to see their terrors embodied in idols which may be placated, and the cunning monks are quick to take advantage of their fears. Thus monasteries arise and grow rich.

These establishments are the finest buildings in Mongolia. Resplendent from afar in colors and gold, their lofty square buildings, often standing on some rise of ground, lose their effect somewhat on closer view, owing to the dirt in which these communities of monks are content to live.

"THE ABODES OF THE LIVING BUDDHAS"

The most famous and best kept monasteries are the abodes of the Living Buddhas. The current belief is that these men are gods incarnate, and when they die, or, as the Mongols put it, "change the vehicle," are reborn into this world with the power to remember their former existence and prove their identity by using phrases characteristic of the last Buddha, selecting things that belonged to him from among many which were not his, etc.

Great parade is made of the testing of a new candidate. Of course, the chief Lamas arrange everything and coach "the

Photograph by Eugene Lee Stewart

MONGOLIAN MEN WAITING FOR THEIR DINNER TO COOK

The average evening meal of the Mongolian "tenthold" consists of mutton boiled with a kind of millet. When done, the morsels are fished out of the pot with fire-tongs and served in a rude basin or on a board (see also illustration, page 501).

Photograph by Eugene Lee Stewart

A MONGOLIAN OF THE BURIAT TRIBE (AT THE RIGHT) BARGAINING WITH A CHINESE

The men of the Buriat tribe usually shave their heads and wear a pigtail. In summer they wear silk and cotton gowns; in winter, sheepskins and furs (see also illustrations on page 494).

Photograph by Adam Warwick

MONGOLIAN WOMEN IN GALA ATTIRE

On ordinary occasions the chief article of apparel for both men and women is a wide, roomy coat of plain material, but on holidays the women wear elaborately embroidered gowns. Note the headgear with curtains of red coral, turquoise, and pearl.

successor," but the common people, perhaps even the majority of the monks, believe the hoax most implicitly.

The crowd that makes its way to the monastery after the races gives abundant proof of the part religion plays in Mongol every-day life. Many a man will be saying his prayers or counting his beads as he rides along. Follow him to the temple itself and you will find him, as soon as he dismounts, joining a company with dust-marked foreheads to make the rounds of the sacred places, visiting at every shrine, bowing before every idol, prostrating himself on sloping wooden platforms.

Fanatical devotees may be met performing the "falling worship"—that is to say, throwing themselves flat on their faces and marking the place of their next prostration by their foreheads—a very exhausting form of piety, which soon wears out hands and clothes unless (as generally happens) wooden sandals are fitted to the hands and sheepskin pads to the knees.

Even little children may be seen turning prayer-wheels filled with written prayers, the idea being that any devout believer who turns the wheel acquires as much merit by so doing as if he had repeated all the prayers thus set in motion.

Photograph from Luther Anderson

A MONGOLIAN LADY SITS FOR HER PORTRAIT BEFORE A CHINESE PHOTOGRAPHER

Note the primness of the pose, the beauty spot on each cheek, and the cup-and-saucer and clock decorations at the lady's right.

One of the greatest festivals of the Lama church is the Devil Dance, which takes place each spring and represents the chasing out of the Spirit of Evil. The dance is simply a series of posturings of men and boys in rich costumes and fearsome animal masks accompanied by an impressive chant.

But a far more interesting survival of the primitive nature cult is known as the Midsummer Festival. It attracts crowds of pilgrims. Caravans begin to arrive many days in advance, when the surroundings of the temple present a busy scene of activity, with Chinese traders crying their wares and itinerant restaurants preparing food.

The richer and more prosperous visitors arrive in camel-carts, with an impressive train of outriders, and camp in their own tents. Some families come in bullock-wagons, which, with a few mats fixed over them, make admirable shelters for their stay.

But by far the greatest number appear on horseback, solitary or in companies,

Photograph from Horace Brodzky

TWO MONGOLIAN BEAUTIES, THE WIVES OF WELL-TO-DO CATTLEMEN

They wear their wealth upon their hair, including a profusion of silver ornaments.

men and women, respectable characters and notorious thieves, Lamas and laymen, dressed—some well, some poorly, but nearly all gaudily—in yellow, blue, red, white, or green.

On the day of the ceremony the monastery is astir before dawn. The monks of various grades assemble soon after cockcrow, gorgeous in purple hieratic gowns, red waistcoats, scarlet or golden togas.

The Living Buddha appears in his fringed orange felt helmet, the abbots in their fat lacquer hats, the lesser Lamas in silk or gold brocade skull caps, the lay officials in the old Manchu hats topped with colored buttons to denote their rank.

The whole company rides out of the monastery gate on ponies well groomed for the occasion and crosses the steppe to the obo, or sacred mount.

Such elevations, crowned by piles of stones with a flagstaff and fluttering prayer banners in the center, are landmarks all over Mongolia (see illustration, page 543). They represent the ancient totems to the nature spirits which have been adopted by Lamaism from the "Black Faith" (Shamanism) and dedi-

Photograph by Adam Warwick

A MONGOLIAN PEASANT WOMAN RETURNING FROM A MIDSUMMER FESTIVAL

Note the typical Mongolian coiffure. The precise nature and shape varies according to the tribe.

cated to some saint of its own creed. Every Mongol stops to worship at them, leaving some kind of an ex-voto to attest his piety—a bit of rag or fur from his clothing or a handful of hairs from his horse's mane or his own head.

Having ascended the hill, the priests gather round the stone cairn, which has been previously decorated with leaves and branches. A tent is set up near by for the Living Buddha, the high Lamas, and the civil officials. Lesser dignitaries squat upon the ground in a circle.

Then the weird service begins, accompanied by all the strange paraphernalia of the Lama cult—huge bronze trumpets six feet long, flutes made from sea shells, and libation cups from human skulls.

A FEAST OF COLOR IN A RADIANT LANDSCAPE

The ceremony must be completed by sunrise, when the participants return to the monastery for the popular festival, some riding rapidly, some riding cautiously, but all converging on one center, and many of them ending up with a furious gallop to show their fine ponies at their best.

The crowd is a feast of color in a radiant landscape. The background of distant blue hills merges into a translucent blue sky, where an eagle, sharply silhouetted in the clear air, circles above. Holy cranes watch solemnly beside the waters of a distant salt lake that reflects the azure of the heavens. Queer long-tailed mice prowl about. A spotted deer, whom it is a sacrilege to kill, stands fearlessly—an orange speck—beside the temple, and a herd of fleet "tserengs," or steppe antelope, knowing the hunter is less considerate of them, bounds away toward the horizon.

By this time a group of white tents has been erected in the meadow for the feast. The largest serves as a reception hall. Inside a big transversal bench has been prepared for the guests of honor, whose places are marked by double cushions covered with priceless old silk carpets

Photograph by Adam Warwick

A PAIR OF MONGOLIAN HORSE-CATCHERS

The riders carry long birch poles, like fishing-rods. Mongol ponies are exported in great numbers to China. The mares, which are easily distinguished by their flowing tails, are kept at home for breeding purposes.

Photograph by Luther Anderson

A MONGOL COWBOY

Expert horsemasters from childhood, both men and women are equally at home in the saddle. In fact, the Mongol so seldom walks that he develops an unsteady, rolling gait when ill luck forces him afoot.

Photograph by Adam Warwick

TAMING AN UNBROKEN PONY

The man on the ground will, in a moment, seize the pony by the tail. The animal will start off at a run, dragging his captor behind him. The tamer slides over the grass in his soft felt boots until the pony is exhausted (see text, page 518).

Photograph by Ethan C. Le Munyon

A MONGOLIAN HORSEMAN

The pole with the slip-noose is used in place of the lariat and is almost as effective, as the rider will ride into a herd and "cut out" the horse he wants, drop the noose over his head, and soon subdue him.

Photograph by Adam Warwick

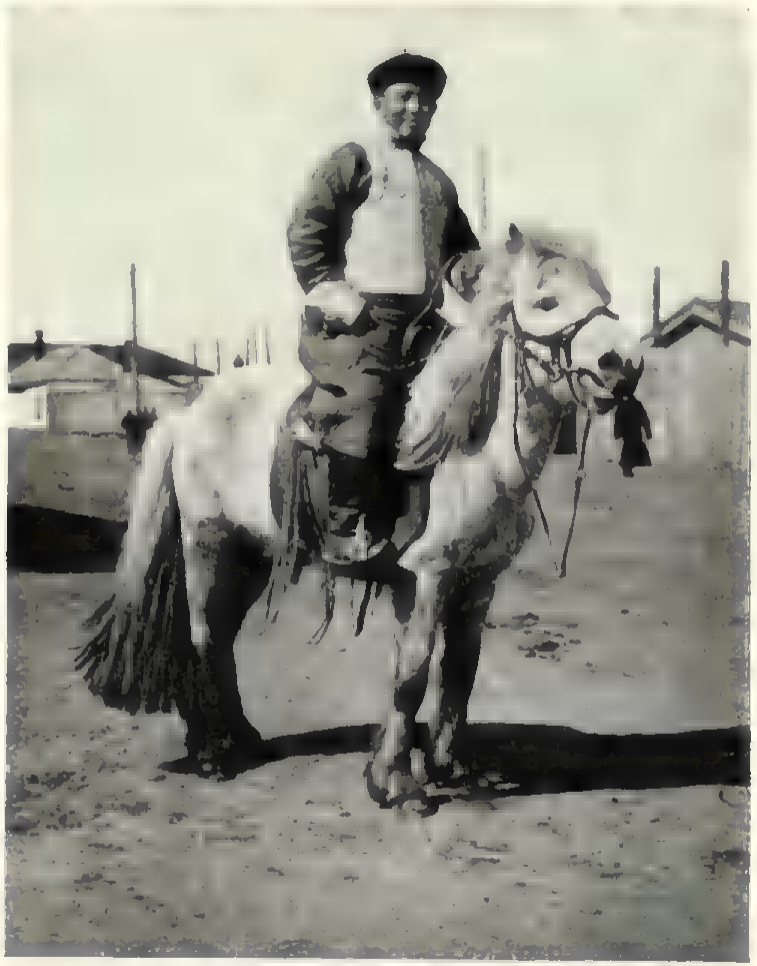
LASSOING A MONGOL PONY

The native breed of horse is seldom more than thirteen hands high, but for endurance and cleverness it has few rivals. It is never a source of care to its owner, who provides neither food nor shelter. A long coat of hair in winter suffices for the latter, and when the snow covers the pasture land the little beast paws its way to the sparse remains of summer grass underneath.

Photograph by Luther Anderson

A HARDY, SELF-RELIANT, HOSPITABLE MONGOL OF THE STEPPES

He cares not for wealth or power. His flocks and herds provide him a livelihood, and his temporary abiding place (usually for ten days at a time) is wherever he chooses to pitch his tent.



Photograph by Eugene Lee Stewart

A MONGOLIAN LAMA POSING FOR HIS PICTURE

The Lamas, and in fact nearly all Mongolian men, are glad to have their pictures taken, but it is a decidedly different story attempting to obtain photographs of the women.

Photograph by Eugene Lee Stewart

THE SON OF A HIGH MONGOLIAN OFFICIAL, WEARING HEAVILY PADDED WINTER CLOTHING

The Mongolians might be said to be born on horseback. Women ride as well as men. In the races, the children jockeys ride without saddles, but carry handkerchiefs to wipe the dust from their ponies' eyes and nostrils.

Photograph by Eugene Lee Stewart

A MONGOLIAN OF THE OFFICIAL CLASS AND HIS NEPHEW, MOUNTED ON A MONGOLIAN PONY

from the treasury of the monastery. Two choirs of singers in bright robes kneel on either side of the broad entrance and chant a welcome.

Soon the feast begins. A cup made of the precious "zabia" wood, which will make water boil and has the power to detect poison, is placed before each distinguished visitor, with smaller cups for the "airak" and "koumiss"—liquors made from fermented milk.

The principal meat dish is mutton. Sheep are served whole on large platters, the four legs arranged around the rump, the skull on top.

As a kneeling attendant passes each dish to a guest, the Lama host makes a cross on the skull, which is then taken away. A second serving Lama, acting as butler for the occasion, then cuts up the meat. The rumps and tails are given to those whom the monks especially delight to honor.

This curious custom originates from the fact that, a sheep having but one tail, the presentation of this delicacy to a person necessitates the slaying of a sheep especially for him, and it must also be a good one, for none but a fat sheep has a tail fit to be seen.

"TABLE MANNERS" IN MONGOLIA

To the foreigner a Mongol feast is a doubtful pleasure. He dislikes the idea that the unfortunate sheep have been slaughtered in the barbarous native way (said to preserve the flavor), by ripping open their bellies, after which operation the butcher puts his hand into the viscera and snaps the aorta. It is difficult also

A MONGOLIAN CAMEL-DRIVER AND HIS CHARGE

It is a tradition among the People of the Wilderness that the breath of the camel is so poisonous as to shorten the life of the driver.

Photographs by Eugene Lee Stewart

MONGOLIAN CAMELS FORAGING THROUGH THE SNOW AND OFF THE TOPS OF TREES

It will be noted that the Mongolian species is the Bactrian, with two humps, whereas the dromedary, or one-hump animal, is found in Arabia.

Photograph by Luther Anderson

A MONGOL OX CART

This is the same type of cart which was used by Genghiz Khan to transport his army supplies seven centuries ago.

Photograph by Eugene Lee Stewart

A CARAVAN STARTING FROM HAILAR TO URGA

These caravans number from ten to fifty camels. They carry blankets, clothing, tobacco, and other commodities to the native population of Urga and usually return empty.

THE FOREST ZONE OF OUTER MONGOLIA

Photographs by Douglas Carruthers

JOURNEYING TOWARD MONGOLIA'S PASTURE LANDS

The most fertile portion of Mongolia lies to the north of the Gobi Desert, along the Siberian frontier.

Photograph by Adam Warwick

WEALTHY MONGOLIANS TRAVEL TO THE FAIRS IN CAMEL-CARTS WITH AN IMPRESSIVE TRAIN OF OUTRIDERS (SEE TEXT, PAGE 525)

Photograph by Eugene Lee Stewart

RUSSIANS SUPERVISING THE DEPARTURE OF A CARAVAN FROM HAILAR TO URGA

The two men with the fur caps are the owners of the caravan. As soon as it is under way, they will return to their homes in town, and at the end of a week or ten days will mount their ponies and overtake the caravan, in order to be present when it arrives at the Mongolian capital.

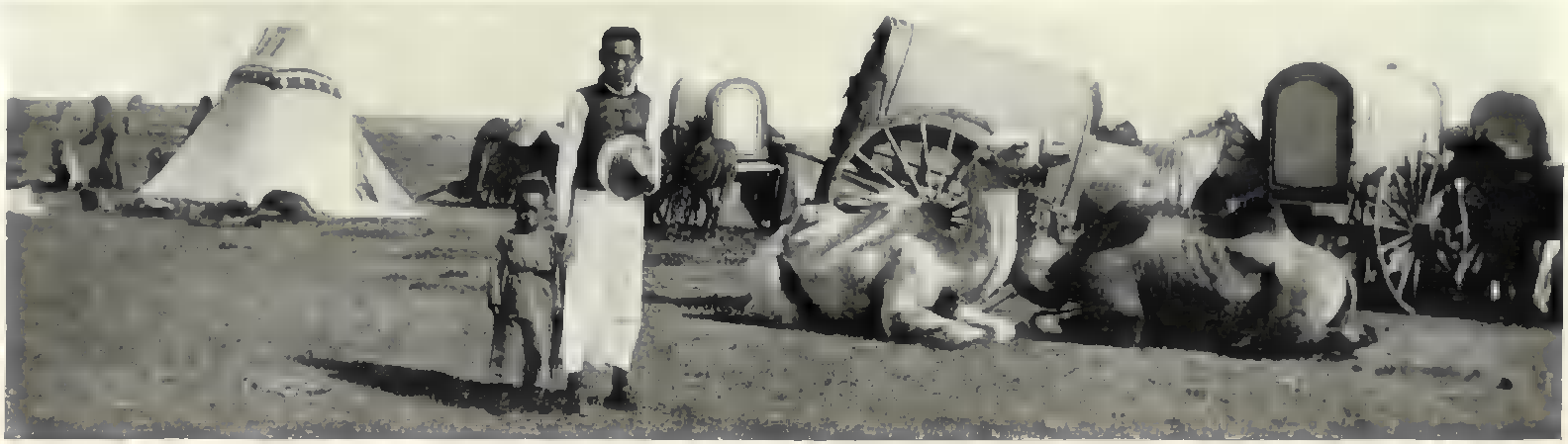
Photograph by Adam Warwick

A MONGOLIAN OBO ON THE DISTANT HORIZON

These elevations are landmarks in all parts of Mongolia. They represent the ancient totems to the nature spirits (see also illustrations on pages 542 and 543).

Photograph by Adam Warwick

A COMPANY OF MONGOLIANS STARTING ACROSS THE STEPPE TO THE OBO, OR SACRED MOUNT (SEE TEXT, PAGE 526)



Photograph by Eugene Lee Stewart

A MONGOLIAN LAMA CAMP

The priests are conducting religious services near by and will remain camped here for several days. A Mongolian school teacher and his nephew are seen in the foreground. The camels have been recently clipped.

Photograph by Adam Warwick

A WRESTLING BOUT AT A MONGOL FESTIVAL

At the conclusion of the match, which consists of three rounds, the winner will approach the grandstand tent in kangaroo-like leaps, as etiquette requires. He will kneel before the Lama, who will bestow upon him a robe of silk, an embossed silver cup, or an honorary scarf.

to eat comfortably, having to attack, with only the assistance of a knife, a great expanse of fat mutton spread on a brass dish nearly two feet in diameter.

Practice, however, makes Mongols expert, and in an incredibly short time each native has gobbled his share, seizing the piece of meat in his left hand and cutting it off close to his lips, while the knife flashes past so close to his face that, but for his short nose, accidents would certainly happen.

After all have gorged themselves and grown cheery with copious drafts of airak, hosts and guests mingle with the crowd in the meadow for the "fun of the fair." Many gather round a story-teller, who recites a legend drawn from the rich Mongolian folklore, some historical incident connected with the Great Khan or some quaint fairy tale inspired by the mystery of the steppes.

A MONGOLIAN WRESTLING BOUT

The majority hasten to see the wrestlers (see illustration on this page). Dressed in a costume with stiff vest and short skirt, not unlike the garb of a Roman soldier, two champions face each other in the center of an open space. One is obviously a horseman, to judge by his

Photograph by Eugene Lee Stewart

MONGOLIANS BRINGING SIBERIAN SHEEP TO MARKET

The "shepherd's crook" is the familiar long pole with a noose at the end (see also illustrations on pages 528 and 529).

bowed legs. His length of arm and breadth of chest show him to be a redoubtable opponent. The adversary is a gigantic Lama belonging to the "tsang" (community of the Living Buddha) of the neighborhood. Three rounds constitute the match, and according to the rules neither wrestler may grip the other, but each must try to throw his opponent by laying hold of his belt.

The first bout is adjudged to the Lama amid great enthusiasm; the second goes to the horseman, and the third, which the crowd watches in a fever of excitement, is also won by him after a hard struggle.

Then the proud champion, much cheered, rises to his full height, expands his mighty chest, and approaches the entrance to the grand-stand tent in big jumps, as etiquette requires. Here he kneels before the Lama, who distributes the prizes, and receives a reward—a roll of silk, an embossed silver cup, a "Khadak," or honorary scarf, or a few bricks of tea, which he raises above his head in token of thanks. After that he retires with more kangaroo leaps and another pair of athletes appears.

Apart from the amusements, there is also much visiting done at these fairs, which afford almost the only opportunities that neighbors, who live miles apart, have of becoming acquainted with one another. This applies especially to the womenfolk, whose lives of household drudgery are dull and lonely, while the men are away on the steppes rounding up the herds.

COSTUMES OF MEN AND WOMEN ARE MUCH ALIKE

The festivals also afford them a coveted opportunity to show off their finery. The dress of both sexes is much alike, as far as shape is concerned. The main difference is that the men gird themselves with a belt, while the women allow their long garments to hang loose from shoulder to heel; hence the common word for woman in Mongol is "beltless."

The outer robe of both sexes is a wide, roomy coat, which reaches to the ground,

Photograph by Eugene Lee Stewart

A SPECIAL TYPE OF OBO USED WHEN LAMAS HOLD SERVICES FOR MONGOLIAN SOLDIERS
(SEE ALSO ILLUSTRATION ON PAGE 543)

with sleeves so ample that the arms can be withdrawn from them and reintroduced without touching the buttons.

In this gown men and women are, for all practical purposes, inclosed in a little private tent from which only the head projects. It allows the wearer to dress and undress beneath it in perfect privacy, whether on horseback or surrounded by the crowded inmates of a full tent. Though on ordinary occasions wearing plain material, on high days and holidays the women don beautiful embroidered gowns often with quaint padded epaulettes.

MONGOLIAN WOMEN WEAR THEIR WEALTH ON THEIR HAIR

But the most remarkable features of Mongol costumes are the hair ornaments and head-dresses of the women (see illustrations, pages 525 and 526). Even a poor girl, once she marries, wears a profusion of silver ornaments on her head. The precise nature and shape of these varies with the tribes. One at least has a most ludicrous coiffure for its matrons, which projects so high that the cap, imperatively demanded by etiquette, is tied on above the ornaments quite clear of the head. Others adopt curtains of red corals or turquoise or strings of pearls reaching often to the waist.

When the wearers take their stand together in the picturesque veranda of some temple, the effect is most striking.

At the close of the festival, which may last two or three days, the crowds depart to their homes, sometimes hundreds of miles distant. A few must cross the Gobi Desert, that dreary stretch of sand and stones which taxes the endurance of man and beast, as mile after mile the weary camels tramp across a stretch of country where there are no tents, no wells, no inhabitants, through solitudes of sand and rocks.*

Alas for him who loses his way in a dust-storm here and wanders helplessly among the boulders, which in size, shape, color, and arrangement mock him with their resemblance to human habitations!

The more fortunate pleasure-seekers travel back across the steppes, where the noon mirages mock and beckon, where lakes glimmer and clouds on the far horizon give the illusion of mountain ranges,

* See "A Trip Across the Gobi Desert by Motor Car," by Ethan C. de Munyon, in the NATIONAL GEOGRAPHIC MAGAZINE for May, 1913.

rendering unreal a world of beauty and of dread.

THE MONGOL TENT IS MADE OF FELT

It is rare indeed that at nightfall the wanderers will find an inn, but the rule of the plain is that any traveler who demands hospitality at a tent must be lodged and fed, except in the rare cases where a tent is under prohibition because of sickness and it is therefore impossible to allow strangers to enter.

The lodging is nowhere luxurious, though the larger encampments—"ails," as they are called—have special guest tents with wooden doorways.

The average Mongol yurt is of the simplest construction (see illustration, page 550). Round a mud floor is built a trellis-work of laths about four feet high, from which a number of sticks radiate to a point at the top. These are covered with a single or double layer of felt, tied down firmly in winter by leather thongs, but raised in summer to admit the breeze.

Photograph by Eugene Lee Stewart

MONGOLIAN LAMAS CONDUCTING AN OUTDOOR RELIGIOUS CEREMONY

The obo, or shrine, is built up of stones, dirt, and tree branches liberally punctuated with paper banners bearing prayers to the spirits. The meat eaten during the feasts which accompany these religious celebrations is blessed by the Lamas. The flesh which cannot be eaten is placed on the obo to appease the appetites of the spirits.

The furnishing of the interior is equally simple. In the center is an iron fireplace, in which "argol" (dried cattle dung), the only fuel to be procured, is burned. The smoke finds its way through a hole in the roof, so much of it at least as does escape. Round the walls are a few chests and presses of the rudest Chinese manufacture and plain brass pots from Peking.

A few sheepskins and pieces of felt represent bed, sofa, and chair. Sometimes the refinements of life are represented by a basket, a pan, or a broken bowl in which half a dozen carefully-tended heads of garlic are growing.

THE GUEST SLEEPS BESIDE THE LAMBS AND CALVES

If travelers are not proud and are willing to lie down beside the lambs and calves of the household, even the poorest Mongol gives a cordial welcome and the

Photographs by Adam Warwick

A TYPICAL MONGOLIAN MONASTERY

These establishments are not merely the centers of religion, but of amusement. The religion of the Mongols is one of terror—a revival of the morbid Indian cult of Siva.

Photograph by Eugene Lee Stewart

A CHIEF LAMA, IN YELLOW SILK ROBES AND BRASS HAT, AND A HIGH MONGOLIAN OFFICIAL, RETURNING FROM RELIGIOUS SERVICES

Photograph by Adam Warwick

THE DEVIL DANCE, ONE OF THE GREATEST FESTIVALS OF THE LAMA CHURCH

This ceremony takes place in the spring and represents the chasing out of the Spirit of Evil. The dance consists of a series of posturings by men and boys, who wear over their heads fierce-looking animal masks (see text, page 525).

Photograph by Luther Anderson

A BUDDHIST TEMPLE AT A TOWN ON THE CHINESE-MONGOLIAN FRONTIER. NOTE THE TYPE OF SADDLE ON THE CAMEL

Photograph by Eugene Lee Stewart

MONGOLIAN SCHOOLBOYS AND THEIR MONGOLIAN TEACHERS IN CHINESE MILITARY UNIFORM

When the Mongols retired from China, the Manchus took over their rule and assumed a nominal control over Mongolia. But the Mongols were allowed to preserve their original tribal form of government. When the Manchus in turn disappeared from China, the Mongols declared their complete independence. Today, however, they are fearful of the inroads of the Chinese, whose thrifty agriculturists are already encroaching on the Mongolian steppes.

Photograph by Eugene Lee Stewart

MONGOLIAN SCHOOLBOYS PLAYING A GAME RESEMBLING OUR "BLIND MAN'S BUFF"

The mud wall in the background surrounds the village of Hailar, on the Trans-Siberian Railway.

Photograph by Eugene Lee Stewart

A MONGOLIAN CEMETERY

The Mongolians do not bury their dead, but set the coffin on the ground and cover it with earth, and in time the elements undo the work which has been performed to keep prying eyes away. The mound in the foreground has been recently made. Frequently the dead are merely cast out upon the steppe (see illustration below).

Photograph by Adam Warwick

HUMAN BONES WHITENING ON THE MONGOLIAN STEPPE AND A BOX CONTAINING A CONDEMNED PRISONER

While an occasional cemetery is found (see illustration above), the more customary method of disposing of the dead is to leave the bodies exposed on the plains to be preyed upon by wolves and dogs. Condemned criminals, fastened in wooden boxes, are left to die of hunger and finally to be eaten.

best he has. "Only observe etiquette, and every tent is yours," as the saying goes.

For even among the rough-and-ready People of the Wilderness there are a few essential rules of politeness. From whatever side a tent is approached, for instance, be sure to ride up to it from the front.

When within a short distance stop and shout "Nohoi" (dog). The Mongol dogs are very savage, and it would be dangerous to attempt to advance farther till the people of the village have come out to restrain them, which by law all Mongols are forced to do. Until they receive this protection, horsemen remain in the saddle, and those on foot keep the animals at bay as well as they can with sticks.

A Mongol dog has many wolfish qualities, and the disgusting Mongol habit of leaving corpses on the plains instead of burying them increases his savage instincts.

No white man can pass the human skulls and bones strewn over the steppes without a shudder, and he turns sick with disgust at the sight of the occasional wooden box in which a condemned criminal is left to die of hunger and finally be eaten by the wolves and dogs (see illustration, page 548).

Photograph by Eugene Lee Stewart

A MONGOLIAN COFFIN, PAINTED GREEN AND DECORATED IN WHITE AND GOLD

EXCHANGE OF SNUFF BOTTLES IS A TOKEN OF HOSPITALITY

Once a stranger enters a tent, however, the savage creatures will no longer attack him; so that to bring a stick inside is considered a lack of good manners. Having left his stick outside, then, the traveler on getting through the low doorway, says "Mendu" (greeting) to the people inside and proceeds to sit down on the left side of the fireplace cross-legged or, if he cannot do this, with his legs stretched toward the door.

The next thing is the interchange of snuff bottles. A Mongol visitor offers his first to the host and the people of the tent, and receives theirs in return; but, as foreigners do not carry snuff generally, the Mongol host offers his to the foreign visitor. Meanwhile the women have been warming tea.

Photograph by Adam Warwick

A MONGOL GUEST TENT WITH WOODEN DOORWAY AND A MONGOL FAMILY GROUP

Photograph from Horace Brodzky

THE INTERIOR OF A YURT, OR MONGOLIAN TENT-HOUSE

Note the god, an American lamp, and the glass-fronted cupboard with small cups, which contain flour, cakes, tobacco, and rice—offerings to the god. A yurt is never placed where the shadow of a tree can fall upon it, for this brings bad luck. It is made of trellis and covered with felt. The fire is laid in the middle of the one room, and the smoke allowed to find its way out through a hole in the roof. When it rains, this hole is covered up, with consequences easy to imagine.

About sunset the hostess, glancing up at the hole in the roof as if it were a clock, will inquire, "Shall I make dinner?" and her lord and master, nothing loath, will answer, "Make it." Accordingly she proceeds to the dog-proof cage outside the door and hews off a piece of frozen meat with an axe. This is boiled with a kind of millet, and, when pronounced done, the morsels are fished out with the fire-tongs and served in a rude basin or on a board.

TUCKED IN FOR THE NIGHT

Most Mongols retire immediately after this meal, and the servant's last duty is to pile up the fire and then tuck the sheepskin coats snugly around hosts and guests, while the master of the tent, in true Mongol fashion, indicates by the points of the compass the places where the tucking is deficient.

Next morning, on leaving, the traveler mounts his horse at the tent door with a bow and a smile, as the Mongols do not have any customs equivalent to our handshaking and good-bye. A few days later the village itself will have perhaps moved on.

Photograph by Eugene Lee Stewart

A MONGOLIAN BOY AND GIRL WITH LITTLE BROTHER ON BEHIND

The wealth of Mongols is reckoned, not in real estate, but in live stock and these children, as the heirs of an average *yurta*, or family, will possess fifty sheep, twenty-five horses, fifteen cows and oxen, and ten camels. Next to cattle-breeding the most important occupation of this people is the transport of goods. It is estimated that more than 1,200,000 camels and 300,000 ox-carts are employed in the country's internal caravan trade.

Like some of our American Indians, whom they resemble, the People of the Wilderness cannot endure a settled life. All their belongings pack easily on the back of a camel; the few calfskin bags with provisions, the tent, the cooking pots, the grate, two water-buckets, and a few odd pieces of felt are all they need—except space to journey in.

What the Mongols most fear is the attempt of the Chinese to colonize their country, and they see with alarm how the tilled fields of these thrifty agriculturists are already encroaching on the steppe.

THE NEW MAP OF ASIA

MORE than one-half the human race lives in Asia, which has an area nearly six times as large as continental United States, approximating one-third of the earth's entire land surface.

Asia boasts the world's highest peak, Mt. Everest, 29,140 feet, and the ocean's deepest pit, off the coast of Mindanao, in the Philippines, 32,088 feet. Somewhere within its borders was probably the birthplace of man, and from those fastnesses within the shadow of its Himalayas began the migrations which resulted in the peopling of all the continents and all the islands of the seas. It is a land of teeming millions of men and of vast solitudes.

There are twelve rivers on the earth's surface which exceed 2,500 miles in length, and of these six rise in and flow through Asia.

The continent extends from Cape Chelyuskin, within twelve and a half degrees of the North Pole, to the Malay Peninsula, within one and a half degrees of the Equator; and from the Strait of Bab El Mandeb, separating Arabia from Africa, to the Bering Strait, separating Siberia from Alaska, is 6,700 miles—more than a fourth of the circumference of the globe.

A MEDIEVAL EMPIRE DISMEMBERED

To the casual observer, the New Map of Asia, published by the National Geographic Society and issued as a supplement with this number of THE GEOGRAPHIC,* may not present an appearance radically different from that of pre-war Asia; and yet the world conflict on the fields of Europe has wrought vast changes here, resulting in the dismemberment of a great empire, which had come down from medieval times, the creation of five new nations, the provisional creation of four others, and the possible evolution of half a score of semi-independent states from the wreck of what were once the proud provinces that gave allegiance to the Tsar under the collective name of "Russia in Asia."

*Additional copies of the New Map of Asia may be obtained from the headquarters of The National Geographic Society in Washington, paper, $1.00.

While, with the exception of the Turks, none of the ancient peoples of Asia participated in the World War to the same extent as European and American peoples, there were fewer neutral governments in the Orient than in Europe; for Siberia, as a part of Russia; India, Burma, and the suzerain states which cluster on the slopes of the Himalayas, as parts of the British Empire; Indo-China, as a part of the French Colonial Empire; Persia, as a battleground for contending armies; Arabia, China, Japan, and Siam in their own right—all were involved in the struggle.

EVERY ASIATIC NATION AFFECTED

Strictly speaking, Afghanistan and Mongolia alone of all Asia's vast dominions were untouched politically by the World War; and even these two nations were not wholly divorced from it, but were affected indirectly, as Mongolia from 1913 to 1919 was under the protection and guidance of Russia, and Britain's influence was paramount at the court of the Amir of Afghanistan.

As an ally of the Germans, Turkey by her defeat has lost not only most of her territory in Europe, but has been forced to surrender extensive and populous portions of her Asiatic empire, out of which have been set up the "independent states" of Syria, Mesopotamia, Palestine, Hedjaz, and Armenia and the autonomous province of Kurdistan.

France has assumed a guardianship (mandate) over Syria, and Britain exercises a similar office toward Palestine and Mesopotamia until such time as the three countries can be entrusted with their own affairs. Armenia, though created a separate state by the Treaty of Sèvres (the Turkish treaty), has not as yet had her boundaries definitely delimited.

Unless this treaty is radically revised, as is now contemplated, Greece will administer a large and prosperous district surrounding Smyrna, the most important port of Asia Minor, for five years, at the end of which time a plebiscite will be held to determine whether the inhabitants wish the area to be incorporated permanently as a part of Greece or resume its

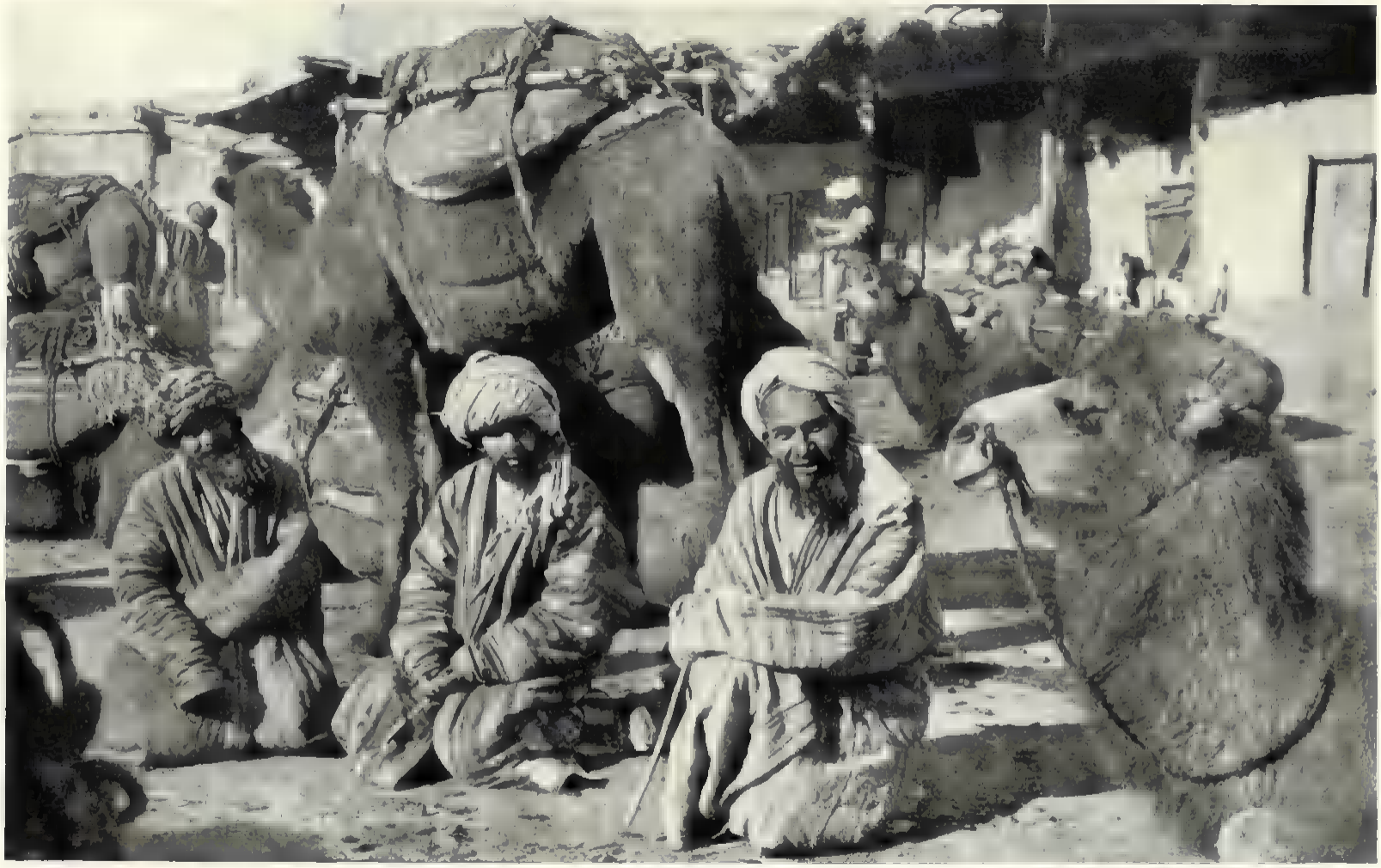
Photograph by Platé, Ltd.

ANTISKID AIDS FOR A POPULAR CLIMB IN CEYLON

The areca, or betel palm, shown in the illustration is a versatile provider. Ivory beads are imitated in betel-nut; cordovan shades are obtained in tanning and dyeing through the use of areca catechu. One out of every ten men in the world dyes his teeth and much of his environment brick red with the astringent juice derived from chewing chopped areca-nut, wrapped in a lime-smeared leaf of the betel vine.

ALL THE INSTRUMENTS TO EQUIP A KOREAN ORCHESTRA ARE FOR SALE IN THIS SEOUL MUSIC STORE

The stringed instrument which three of the shop-keepers are playing is the *komungo*. It is a sort of long, narrow bass-viol without a neck. The player plucks the strings with his right hand and fingers them with his left near the bridge. This instrument has been popular with Koreans for seventeen hundred years. There is no such thing as "time" in Korean music.



Photograph by Maynard Owen Williams

WHEN THE DESERT BURDENS ARE LAID ASIDE: A BOKHARA KHAN

Welcome as a friendly greeting after long separation is the sight of caravanserai lights at the end of the caravan trail. Samovars murmur drowsy contentment and even the disdainful camels gurgle with satisfaction. The gossip of a thousand trails weaves itself into one epic of inconsequence, and even sleep is not sweeter than the companionship of those who find themselves once more at the journey's end.

Photograph by C. H. Kraeh

FEW CITIES OF CHINA ARE MORE PICTURESQUE THAN HANGCHOW

Fourteen centuries ago a small village of fishermen and salt-boilers occupied the site of this great city. It became the center of foreign trade in China in medieval times and was known as the "City of Heaven." Hither flocked merchants, travelers, and adventurers to enjoy the sights and indulge in its material pleasures.

Photograph from M. Branger and Sons

DISCUSSING THE NEWS OF THE DAY IN FRENCH INDO-CHINA

Until given the mandate over Syria, the chief interest of France in Asia lay in Indo-China, which includes the protectorates of Annam, Tonking, and Cambodia, the colony of Cochin-China, and part of the Laos country. French Indo-China has an area more than a third larger than France in Europe.

Photograph by John Claude White

THE LAMAS OF SIKKIM WEAR APRONS MADE OF HUMAN BONES

These "Rugens," as the decorative ceremonial garments are called, are worn during monastic dances. Sikkim is an Indian state, 70 miles long and 50 miles wide, in the Himalayas, between Nepal and Bhutan. The people are agriculturists and there are practically no towns or villages, each family living in a house on its own land.

Photograph by Raja Deen Dayal and Sons

THE PRINCIPAL LANDMARK OF HYDERABAD, DECCAN, INDIA

The present ruler of India's largest native state has inaugurated an era of building which is doing much to beautify his capital on the Musi. But no building is more highly regarded by the Moslem inhabitants of Hyderabad than the Char Minar, with its four towering minarets. It was constructed in 1591 by Mohammed Kuli, the founder of the city.

Photograph by Vittorio Sella

IN THE LAND OF LALLA ROOKH

It is not strange that Kashmir, set among the serried peaks, the eternal glaciers, and placid lakes of the Himalayas, should be famed in song and story as an earthly paradise—a vale of peace and happiness. The "rose of Cashmere" has been incorporated into our language as a synonym for natural beauty.

Photograph by John Claude White

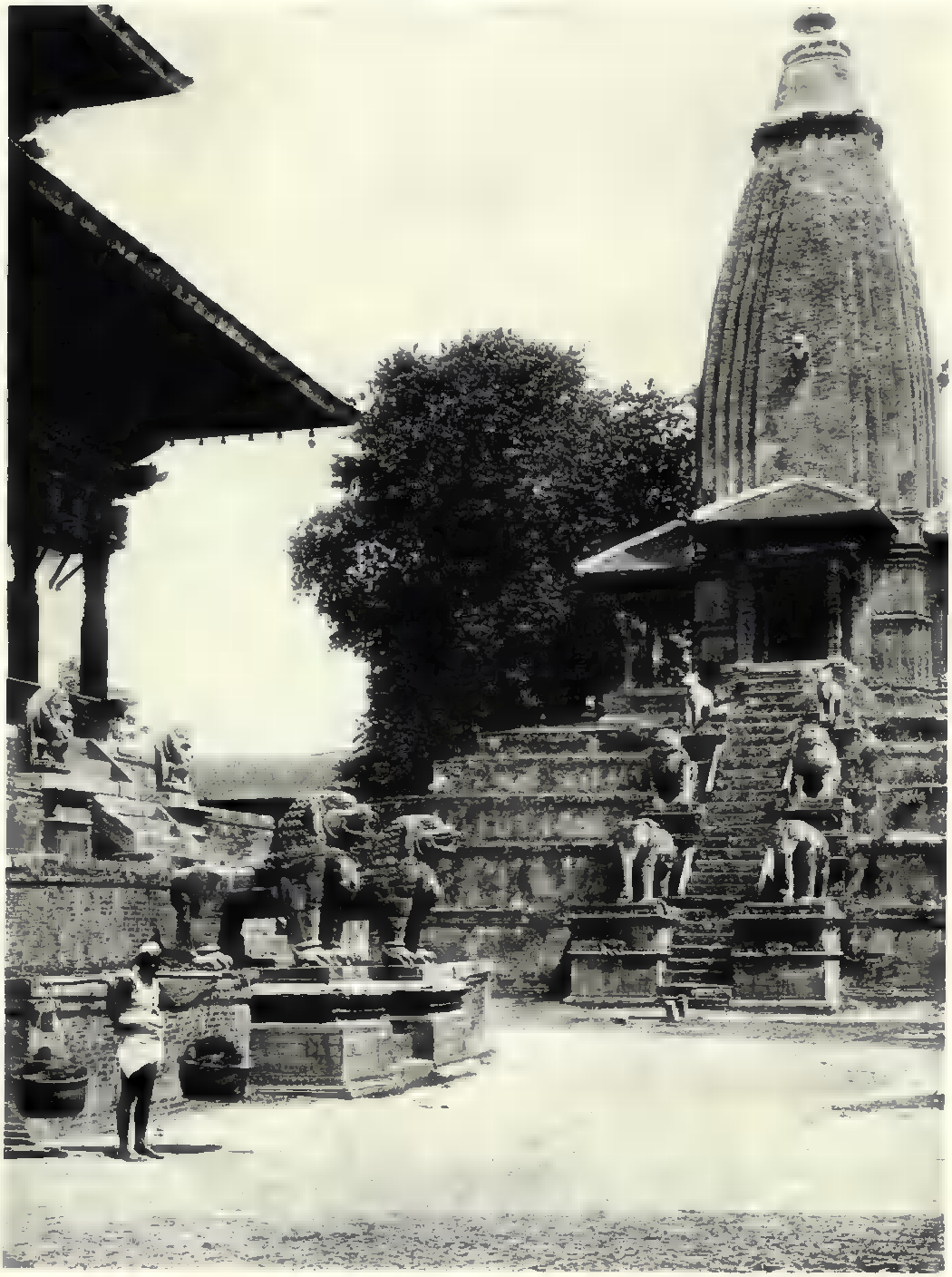
THE PALKHOR CHOIDE MONASTERY, IN THE WALLED TIBETAN CITY OF GYANTSE

Gyantse lay in the line of the British advance into Tibet in 1904. Its jong, or fort, was considered impregnable by the Tibetans, but the attacking force under General MacDonald succeeded in hammering a breach in the walls and capturing the stronghold. This left the road open to the capital of the Dalai Lama, the Forbidden City of Lhasa.

Photograph by Eric Keast Burke

AN ARAB-MADE FERRIS WHEEL IN BAGDAD

On festival occasions such crude devices spring up in the outskirts of the City of Caliphs and prove a popular diversion for Arab children. The motive power is, of course, manual. Note the similarity of these vertical merry-go-rounds to the fête wheels of Eastertide in Irkutsk, Siberia (see illustrations, pages 488 and 489).



Photograph by John Claude White

STRANGE BEASTS OF STONE GUARD THE TEMPLE STEPS AT BHATGAON, NEPAL

The Kingdom of Nepal has the distinction of owning the world's highest peak, Mt. Everest. Bhatgaon, an ancient capital city, possesses some of the most interesting shrines in Asia. Most of these are built of fine red brick. The ornamentation is generally of molded brick of the same color, with dark wood for overhanging windows and doorways.

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IN KOREA, THE LAND OF "MORNING FRESHNESS"

Natives from the rural districts surrounding Seoul enter the capital by passing under the new Independence Arch. Note the queer umbrella hats and white suits of the men at the left and the familiar pill-box headgear worn by the man at the right. The ox-caravan is laden with fuel for the city.

Photograph by Maynard Owen Williams

MARBLE CENOTAPH TO A FAVORITE ELEPHANT OF A MAHARAJAH

Beside the road which leads from Jaipur to the ancient capital of Jaipur State at Amber, there is, among numerous monuments to deceased wives, this costly reminder of one of the dumb servants whose faithfulness is thus rendered memorable. There are a thousand living candidates for burial in this cemetery of the Maharajah's favorite wives.

Photograph by Dr. Edward Burton MacDowell

AT THE END OF THE ROAD TO MANDALAY

In Burma the chief objects of interest to the Western traveler are the graceful pagodas. The Burmese pagoda consists of a masonry terrace, above which rises a bell-shaped structure crowned by a "ti," or umbrella spire, formed of concentric rings of metal, from which are suspended innumerable tiny bells that sway and tinkle musically in the wind.

Photograph by Charles Martin

BENGUET IGOROT GIRLS OF THE PHILIPPINE ISLANDS

Many of the kinsmen of these gentle maids were formerly among the wildest of head-hunters in northern Luzon, but today the members of their tribe are in the main industrious and skillful farmers, planting grain and potatoes on ancient artificial terraces and successfully practicing irrigation.

Photograph from M. Branger and Sons

SUNSHINE AND SHADOW ON TEMPLE STAIRS IN ANNAM

Both the men and women of Annam wear wide trousers and long black tunics with narrow sleeves. Their country is a narrow ribbon of land, 800 miles long, on the eastern coast of the Indo-Chinese peninsula. France exercises a protectorate over the 6,000,000 natives.

former status as a part of Turkey in Asia.*

The Kingdom of Hedjaz, over which rules Husein Ibn Ali, Hereditary Keeper of the Holy Places (Mecca and Medina), extends along the northeast shore of the Red Sea, from the principate of Asir to the southwestern frontier of Palestine. It has an area about equal in extent to that of the State of Colorado and a population of some 750,000. Its capital and chief seaport is Jidda, a town of 30,000 inhabitants.

RUSSIA IN ASIA AN UNSETTLED PROBLEM

Of that vast territory formerly known as Russia in Asia, embracing Siberia, Transcaucasia, Turkestan, and the Steppes provinces, aggregating an area of more than 6,290,000 square miles (more than three times as large as Russia in Europe), but sustaining a population of only twenty-seven millions — barely four persons to the square mile—little can as yet be said with respect to its political future, and even the reports concerning its present status are vague and contradictory.

Out of Transcaucasia three republics evolved — Azerbaijan, Georgia, and, in part, Armenia. Their existence was tempestuous and short-lived. Whether, when the tide of Bolshevism recedes, they will be able to establish their interdependence as a Transcaucasus governmental trilogy none can say. The boundaries indicated on the accompanying map are merely indicative of their approximate extent as originally conceived.

For a speculative discussion of the possible future of the "United States of Siberia and Russian Turkestan," the reader is referred to the admirable article by Viscount Bryce, under the title "Western Siberia and the Altai Mountains," in this number of THE GEOGRAPHIC (pages 469 to 507).

JAPAN ASSUMES KIAOCHOW LEASE

The transfer of German treaty rights in the Chinese province of Shantung (Kiaochow and Tsingtao) to Japan is a cause celèbre of recent diplomatic history. The town, harbor, and district of Kiaochow, embracing an area of some 200 square miles, exclusive of the bay, which has an area of an additional 200 square miles, were seized by Germany in November, 1897, and in the following March were transferred by treaty to the latter under a 99-year lease. A month later the district was declared a protectorate of Germany and remained as such until November, 1914, when it was captured and occupied by Japanese forces.

Despite China's contention at the Paris Peace Conference that there should be a restitution of this leased territory to her, together with a cancellation of all Germany's economic privileges, by the Treaty of Versailles the "lease" was transferred to Japan on the ground of conquest. It was for this reason that China refused to become signatory to the treaty with Germany, and the whole question constitutes in Asia a "sore spot" similar to the score or more which now pock-mark the face of the political map of Europe.

Before the influx of the Japanese, the Kiaochow district had a population of about 200,000. Surrounding the district and bay is a so-called neutral zone of about 2,500 square miles, with 1,200,000 inhabitants.

AMERICA'S INTEREST IN YAP

In addition to her acquisition of the Kiaochow leased district, Japan's spoils from the World War include the formerly German-owned Marshall Archipelago, the Marianas or Ladrone Islands, the Pelew Group, and the Carolines, including the much-discussed Island of Yap, important from an American standpoint as a connecting link for cables between San Francisco, Hawaii, Guam, the Philippines, China, and the Dutch East Indies.

The Carolines consist of 500 coral islets, supporting some ten thousand inhabitants; the Pelews are about twenty-six in number, with 3,000 natives; and the fifteen Marianas have 2,600 inhabitants. The Marshalls consist of two chains of some twenty-five lagoon islands, supporting a population of 15,000.

When the American Pacific cable was laid, at the beginning of the twentieth century, from San Francisco to the Philippines by way of Hawaii, the Mid-

* See also "The New Map of Europe," in the NATIONAL GEOGRAPHIC MAGAZINE for February, 1921.

Photograph by Eugene Lee Stewart

A MONGOLIAN HORSE THIEF SERVING A THREE MONTHS' SENTENCE

The wooden collar, which is bolted together to make certain that it will not come off, is not removed during the three months, and the prisoner gets what rest he can by sitting down and leaning back against a post or wall. On the white strips of cloth is written in Mongolian an account of his crime. During the daytime he is obliged to keep himself on display in front of the prison (under guard), so that his fellow-men may observe the penalty for stealing horses (see pages 507-551).

way Islands and Guam (7,846 miles), a branch line was laid from Guam to Yap. From the latter, lines now radiate to Japan, to Shanghai, and to the Dutch East Indies.

Yap is intrinsically interesting as well as commercially important. The westernmost of the Western Carolines, it is situated some 500 miles southwest of Guam and 800 miles east of Mindanao, of the Philippine group. The arrival of Australian troops in October, 1914, prevented the Germans from erecting a wireless station here, which would have been of great service in communicating with the commerce raider *Emden*, then abroad on the highways of the Pacific.

Although surrounded by an atoll, Yap is of volcanic origin. Its only good harbor is Tomil Bay. Its pseudonym, "the Island of Stone Money," is derived from the fact that native wealth is reckoned in pounds or tons of limestone discs, brought from Babeltop, 300 miles distant. A single "coin" four feet in diameter is said to represent a value of 10,000 cocoanuts. The cocoanut is the unit of value, for copra is the only article of export.

THE EAST IS NO LONGER "CHANGELESS"

The natives of Yap, some 7,000 in number, are safely catalogued as Micronesians, a term which embraces a variety of peoples of Melanesian, Polynesian, and Malaysian stocks. They have light coffee-colored skins and wavy black hair, dark eyes, and prominent cheek-bones, and are neither as tall nor so strongly built as the natives of Samoa, the Fiji Islands, or Tahiti. They are a docile, kindly, indolent people.

Two portentous agencies are at work in the Orient, and until they become relatively quiescent, political boundaries throughout the great continent will be "subject to change without notice." One of these is the disruptive force in peasant Russia, now felt not only in Siberia, in Russian Turkestan, and in the Transcaucasus, but also in Persia. The other is Japan, whose natural desire, based on need for territorial expansion, has resulted in a reaching out into China and eastern Siberia and into the islands of the Pacific north of the Equator.

Asia is no longer the "Changeless East"; it is the Continent of Ceaseless Change.

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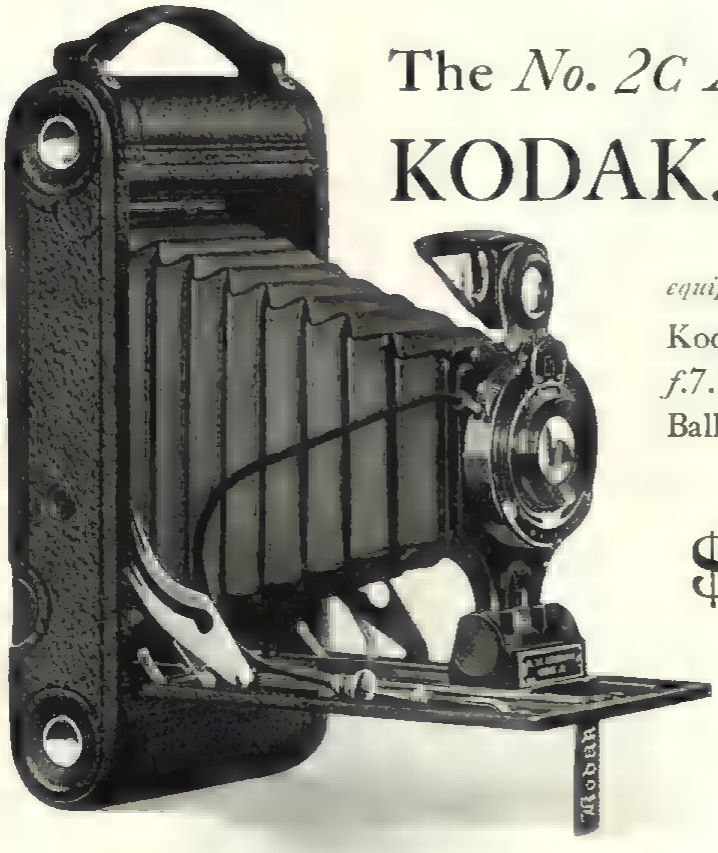

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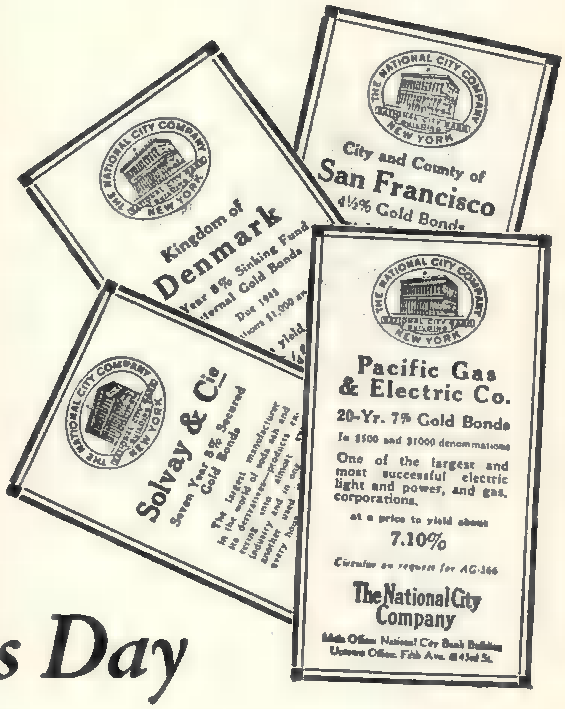

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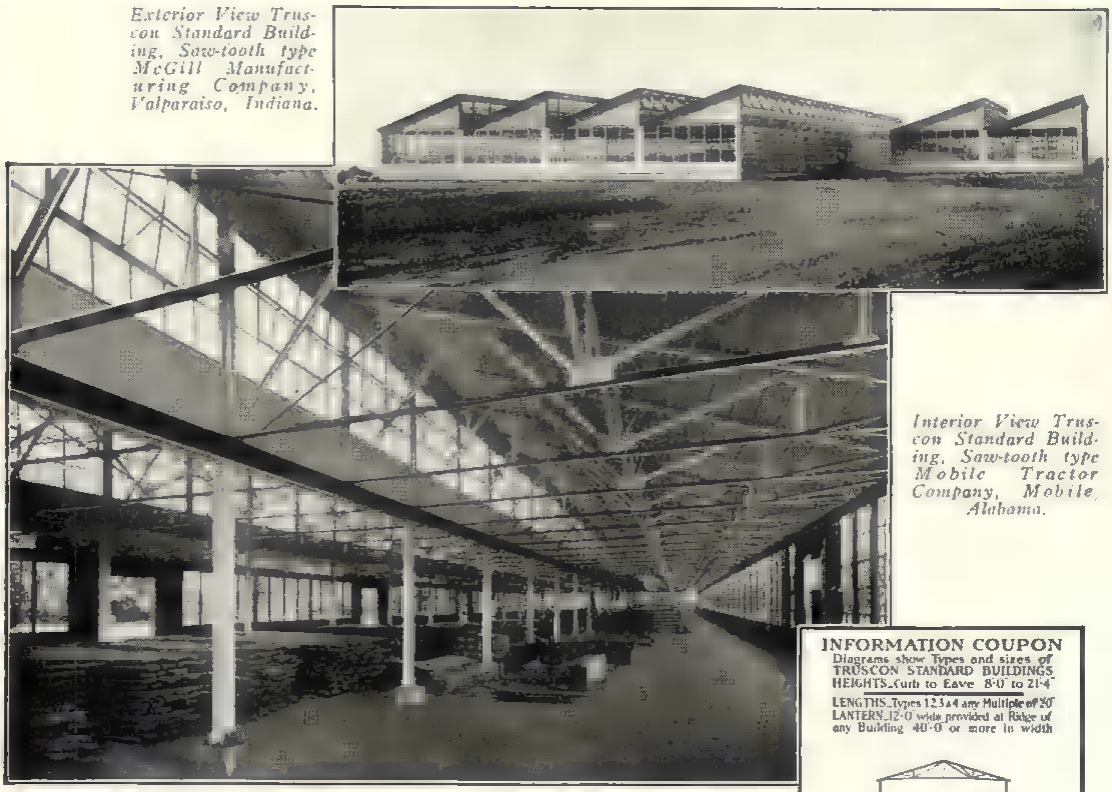

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No. 2

Where the Facts Came From

Airplane picture of Youngstown Pressed Steel Company plant at Warren, O. McCann-Harrison Co., Cleveland, O., consulting engineers. The circumstances of eight piping installations were similar in practically every respect to those in the Eskimo incident related below.

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The Consulting Engineer: "This building won't be enclosed before February 1st so that the piping contractors can get in."

"Not till then?" The President wheeled sharply. "You realize that the piping is the most important part of our equipment. We must be able to turn on heat the day the glass is in our windows."

"Only an Eskimo could pull a wrench here in January," smiled the Plant Engineer. And this kind of piping work takes keen Caucasian brains, close measuring to blueprints, accurate cutting and threading, straight lines and the perfect adjustments of real workmanship. It simply can't be done outdoors in zero weather."

"What kind of antique methods are you talking about?" demanded the President. "That work should be done indoors the way we always fabricate steel beforehand for steel buildings."

The Consulting Engineer turned. "That's just it. Forget the other estimates. Give all seven jobs to the Grinnell Company—the one organization that shop-assembles piping systems and sends them to the job ready for quick erection."

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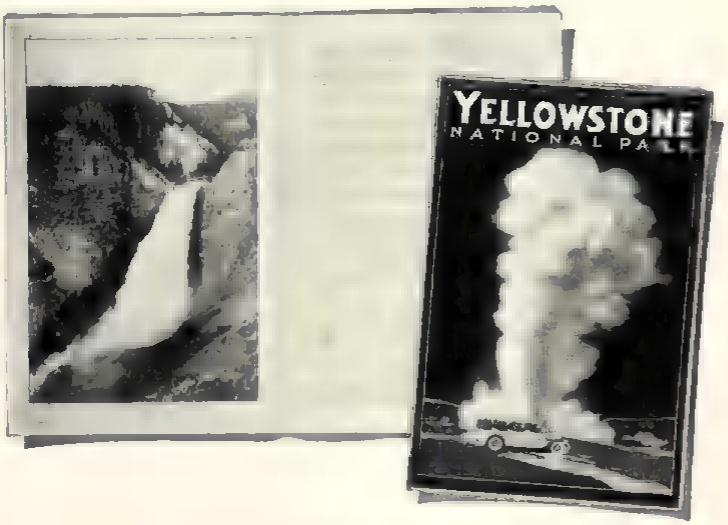

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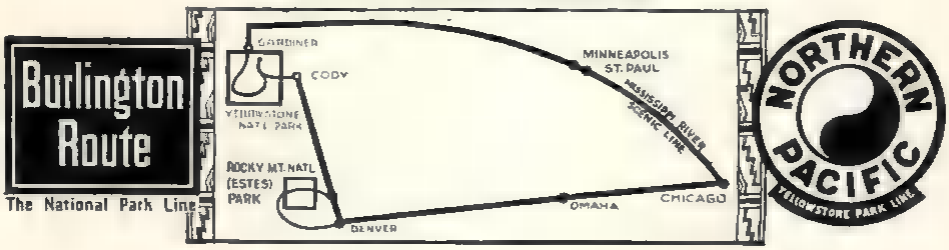

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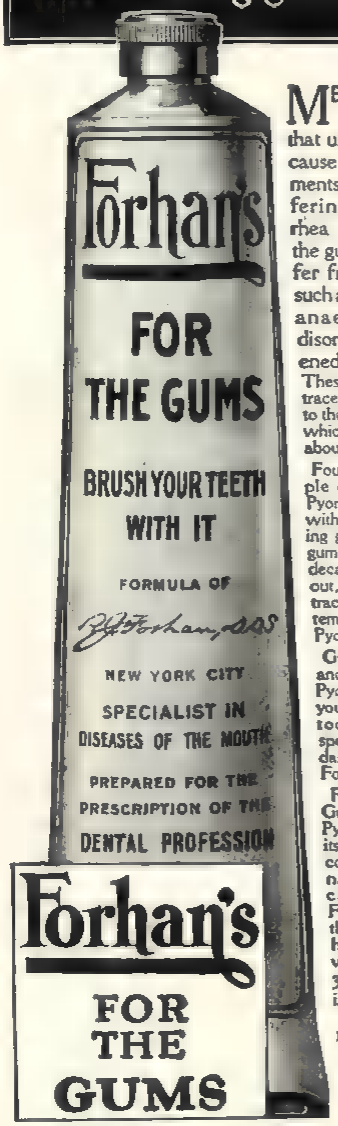
Science proves the danger of bleeding gums



MEDICAL science proves that unhealthy gums cause serious ailments. People suffering from Pyorrhea (a disease of the gums) often suffer from other ills, such as rheumatism, anaemia, nervous disorders or weakened vital organs. These ills have been traced in many cases to the Pyorrhea germs which breed in pockets about the teeth.

Four out of five people over forty have Pyorrhea. It begins with tender and bleeding gums. Then the gums recede, the teeth decay, loosen and fall out, or must be extracted to rid the system of the infecting Pyorrhea germs.

Guard your health and your teeth. Keep Pyorrhea away. Visit your dentist often for tooth and gum inspection, and make daily use of Forhan's For the Gums.

Forhan's For the Gums will prevent Pyorrhea—or check its progress—if used consistently. Ordinary dentifrices cannot do this. Forhan's will keep the gums firm and healthy, the teeth white and clean.

35c and 60c tubes in U. S. and Can.

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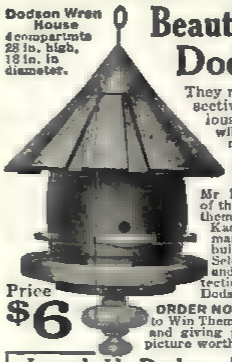

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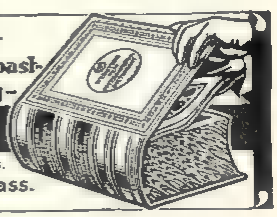

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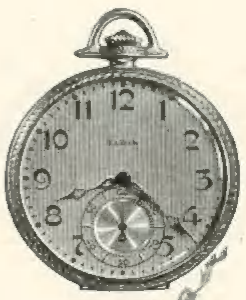

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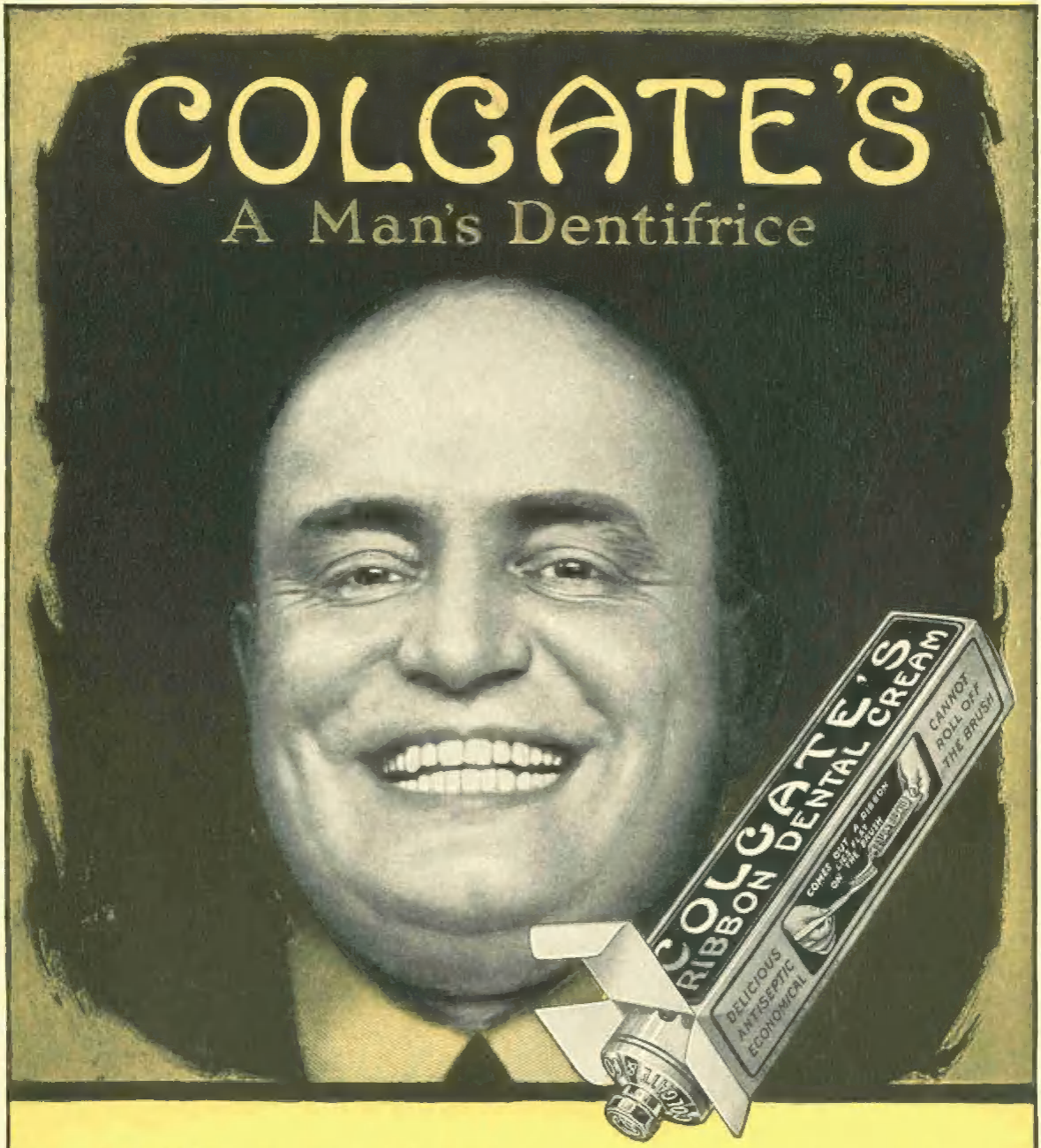
A Man's Dentifrice



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THE NATIONAL GEOGRAPHIC MAGAZINE
GILBERT GROSVENOR, EDITOR

Approximate Scale of Statute Miles

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Subdivision Capitals thus: ..... ●
Railroads thus: .....
Railroads Proposed thus: .....
Ship Canals thus: .....
Motor Route in Mongolia: .....

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FAROE ISLANDS
SHETLAND IS.
ORKNEY IS.
HEBRIDES
NORTH SEA
SPITSBERGEN
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ARCTIC OCEAN
BARENTS SEA
NOVAYA ZEMLYA
KARA SEA
NORTH AMERICA
ALASKA
BERING SEA
ALEUTIAN ISLANDS
PRIBILOF IS.
Gulf of Anadyr
SEA OF OKHOTSK
KAMCHATKA
SAKHALIN ISLAND
KURILE ISLANDS
JAPAN
SEA OF JAPAN
YELLOW SEA
EMPIRE
PACIFIC OCEAN
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CAROLINE IS.
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CELEBES SEA
MOLUCCA ISLANDS
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BRITISH SOMALILAND
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ERITREA
ABYSSINIA
ARABIA
Sand Desert of Rub'-el-Khali
Libyan Desert
PERSIA
AFGHANISTAN
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TURKESTAN
RUSSIA
SIBERIA
CENTRAL ASIA
MONGOLIA
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MEDITERRANEAN SEA
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Le Havre
Bordeaux
Marseilles
Nice
Genoa
Rome
Naples
Venice
Trieste
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Prague
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